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*Official Monthly Publication of the American Medical Women's Association, Inc.*

VOLUME 6 | OCTOBER, 1951 | NUMBER 10



**SCIENTIFIC ARTICLES**

Roentgen Examination of the Urinary Tract, an Appraisal of its Value in Diagnosis, *Elizabeth Schulze Heald, M.D.* ..... 375
Problems in Pediatrics, *Mary B. Olney, M.D.* ..... 380
Regional Enteritis, *Dorothy A. Chess, M.S., M.D.* ..... 383
Immunization Procedures, *Morris Greenberg, M.D.* ..... 385
Axillary Tissue in Radical Mastectomies, Preliminary Report of a Study by Clearing Technique, *Thomas K. Hood, M.D., and Ruth Fleming, M.D.* ..... 393

**PROBLEM CLINIC**

What Should the Doctor Know about Social Security? *Arthur J. Altmeyer* ..... 395

**SPECIAL ARTICLES**

With A.M.W.A. Around the World: The AWH in the Philippine Islands ..... 398
These Were The First, *Elizabeth Bass, M.D.* ..... 399

**REGULAR FEATURES**

Album of Women in Medicine, Eleanor Anderson Campbell, M.D., *Marcelle Bernard, M.D.* ..... 401
News of Women in Medicine ..... 402
Book Reviews ..... 404
Letters to the Editor ..... 406
Opportunities for Women in Medicine ..... 410

**ASSOCIATION NEWS AND ANNOUNCEMENTS**

Message from the President, *Amey Chappell, M.D.* ..... 407
New Members ..... 408
Mid-year Board Meeting Program ..... 409

**MISCELLANEOUS**

Editorial Board ..... Adv. P. 4
Officers of A.M.W.A. and Chairmen of Standing Committees ..... Adv. P. 6
Branch Officers ..... Adv. P. 8
Index of Advertisers ..... Adv. P. 10
International Correspondents ..... Adv. P. 12
General Information ..... Adv. P. 14
Special Notice to Our Readers ..... Adv. P. 21
Books Received ..... Adv. P. 24
Editorial Forecast ..... Adv. P. 26


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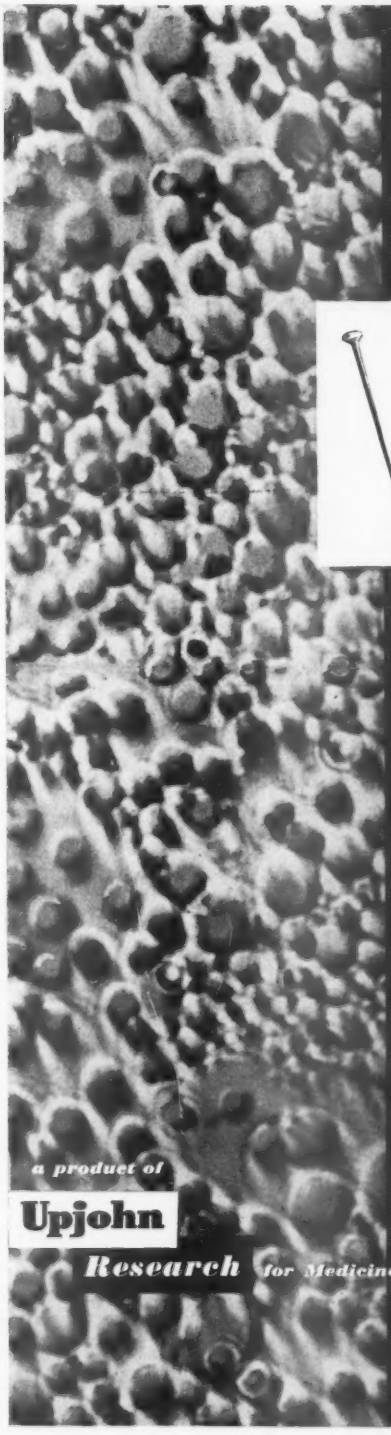

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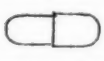
| | |  | | |
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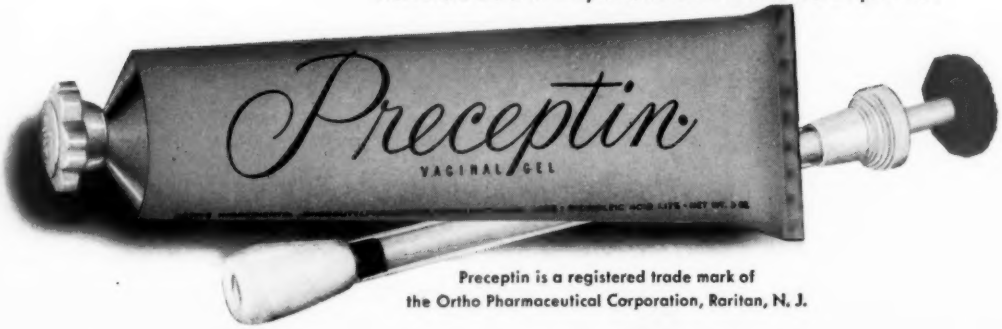


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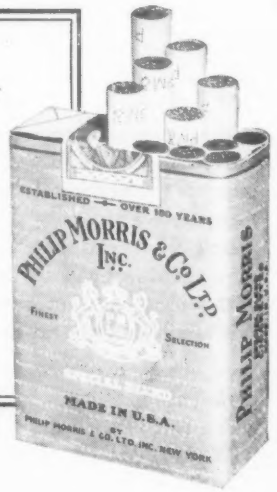


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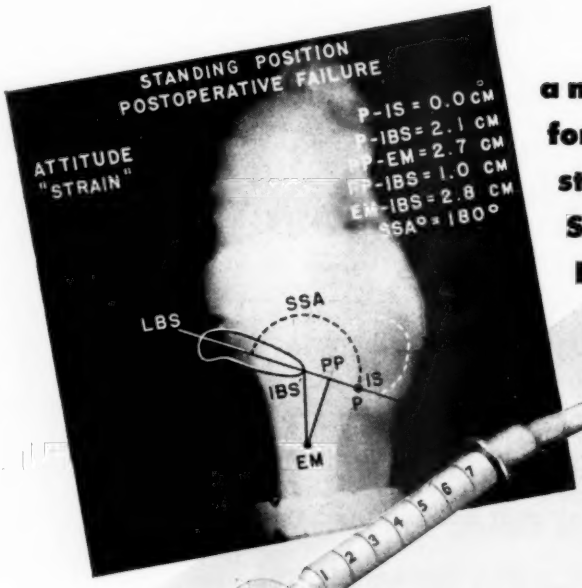


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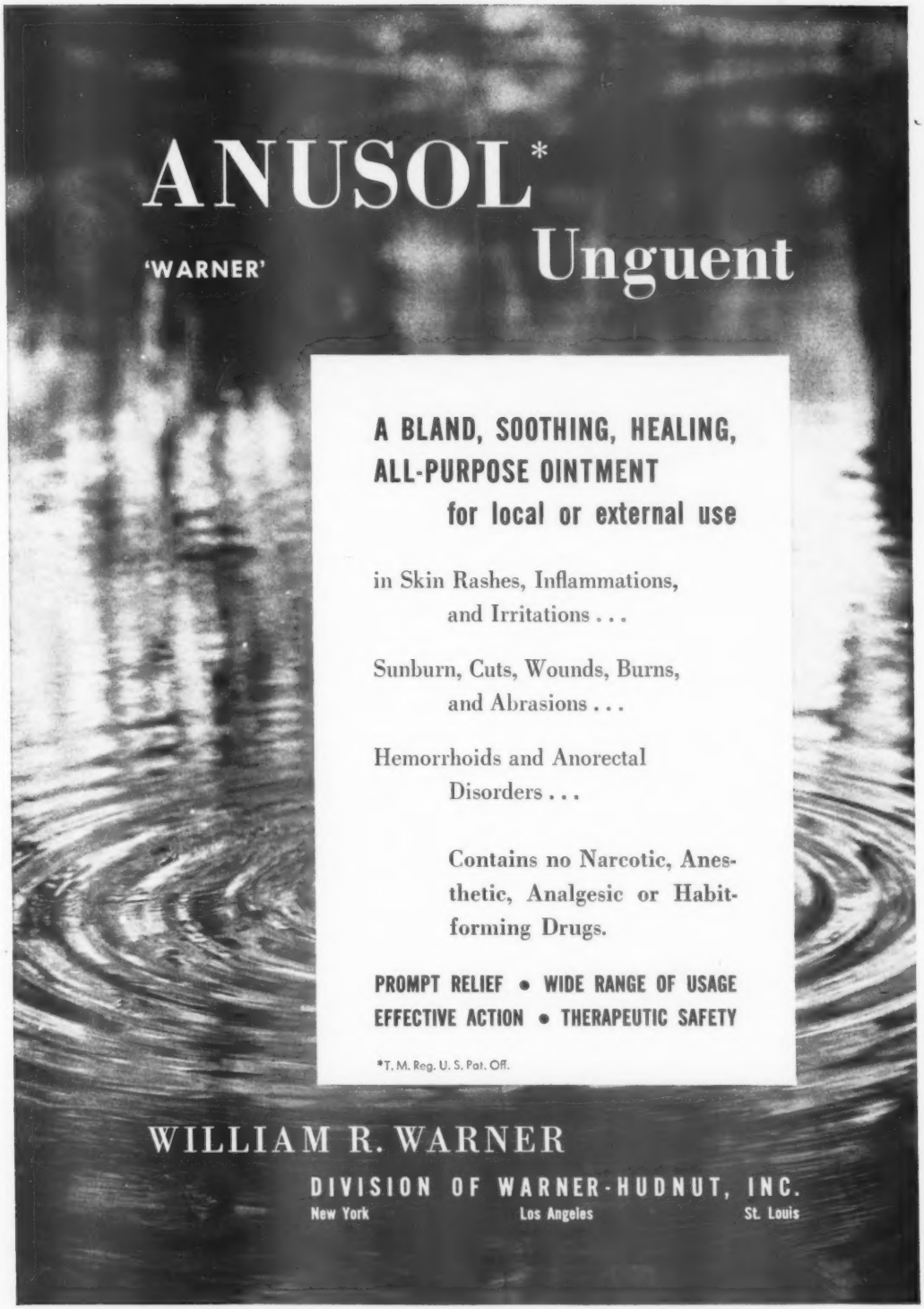
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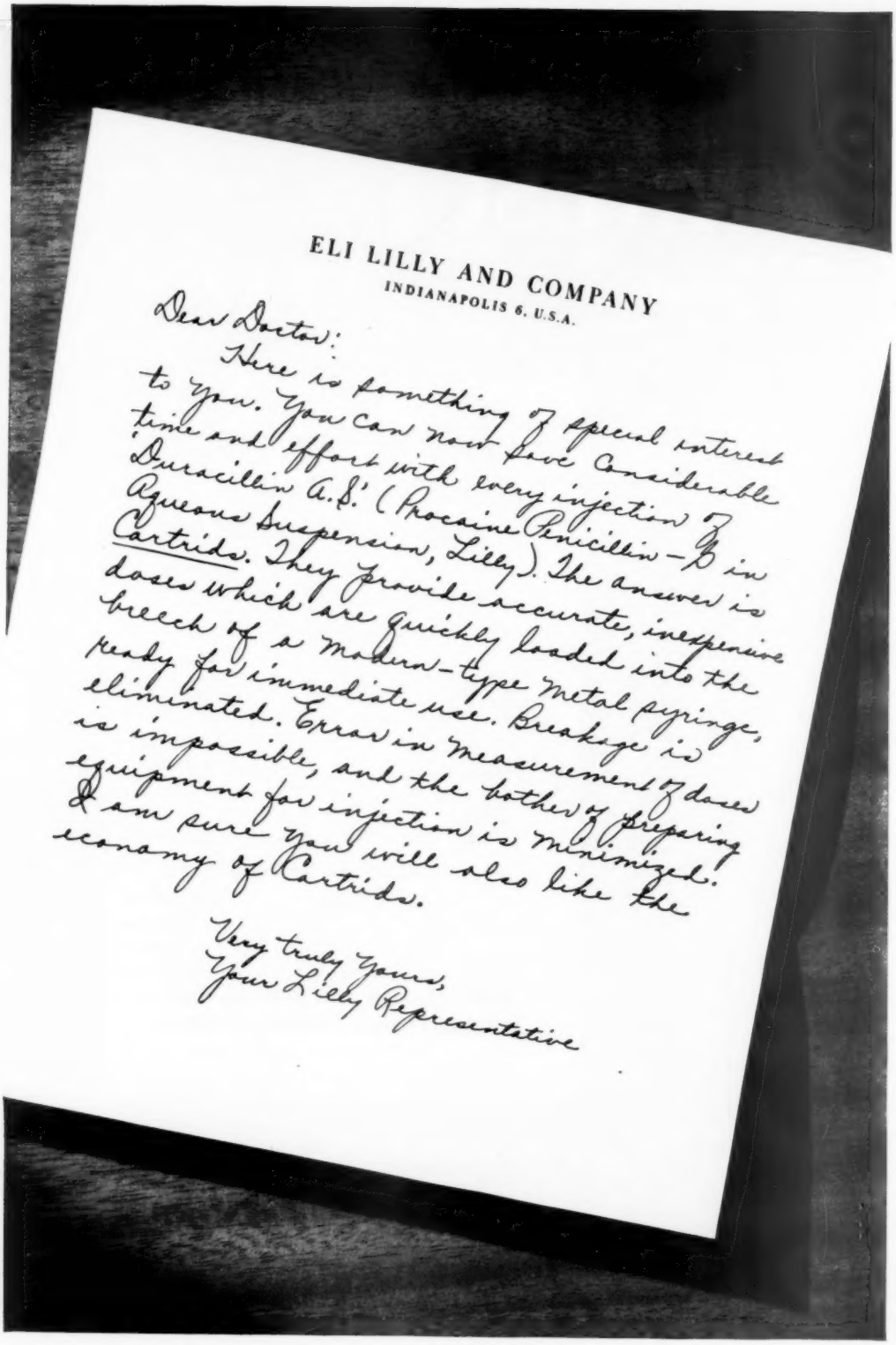

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VOLUME 6 OCTOBER, 1951 NUMBER 10

# Roentgen Examination of the Urinary Tract

## AN APPRAISAL OF ITS VALUE IN DIAGNOSIS

Elisabeth Schulze Heald, M.D.

IN SUSPECTED URINARY TRACT DISEASES the choice of the best diagnostic procedures often falls squarely upon the internist or general practitioner. Relative risks, costs, and results must be pondered. The present discussion is intended to aid in the decision.

In general, there are three methods of x-ray examination of the urinary tract:

1. Plain films without contrast media.
2. Intravenous dye excretion urography.
3. Retrograde injection contrast urography.

It is the opinion of this writer that with few exceptions these examinations should be made in the order named, eliminating the last if sufficient information is obtained by the other two. Cystoscopy with retrograde pyelography is a much more formidable procedure than an intravenous injection followed by x-ray examination.

*Plain films* will often reveal the size, shape, and position of the kidneys. If films at inspiration and expiration, or erect and supine films are made, a fairly reliable index of the mobility of the kidneys can be obtained. Calcifications in and about the urinary structures are visualized. Distorting tumors, anomalies, and inflammatory masses in or adjacent to the kidneys can usually be suspected. Urethrally introduced or penetrating foreign bodies of the bladder may be discovered (figure 1). A large lobulated kidney shadow may indicate hydronephrosis or multiple cysts; a cradle shadow across the upper abdomen, a horseshoe kidney. Approximately 95 percent of all kidney and uretral stones, and a slightly lesser percentage of bladder stones are radiopaque, and therefore usually visible on good plain films (figure 2). However, slight motion during x-ray exposure, confusing bowel content shadows, or obscuring bony shadows may hide some stones. To decide whether a given opaque shadow is a stone may require plain films at intervals (if the stone is passing down the ureter) or intravenous dye excretion urography. Tiny ureteral stones, which escaped notice on plain films, may be clearly revealed and pointed out and differentiated from phleboliths and other small densities by the behavior of intravenously injected dye (figure 3).

*Intravenous dye excretion urography* besides being very useful in the detection and proof of urinary calculi gives much other information. It is a good functional test, clearly differentiating the two kidneys, showing the time of appearance of the dye, and giving some indication of concentrating ability. The internal architecture of the kidneys, ureters, and bladder is usually revealed; and any sizable erosions, protusions, extra- or intra-luminal distortions or obstructions, or displacements are visible. If done early after injury, rupture of the kidneys, ureters, or

*Dr. Heald is Assistant Clinical Professor of Radiology, University of California Medical School, San Francisco.*

bladder can be demonstrated (figure 4). In systemic disease, bilateral renal disease, or juxtarenal disease, it is often desirable to assay the urinary tract. This can be readily and fairly safely done with intravenous pyelography. If the function of one kidney seems destroyed or suppressed, the only conclusion permissible is that the kidney, at least temporarily, is nonfunctioning, or possibly much displaced or congenitally absent. One can only guess at the cause of non-visualization from the history, clinical findings, and knowledge of those stones, tumors, calcifications, and distortions visible on plain films. In such cases much more complete information can be obtained by retrograde pyelography, provided the ureter is not blocked (figures 5a and 5b). Bilateral poor visualization means markedly impaired kidney function, if the patient is sufficiently dehydrated so that there should be concentrated urine.

The hazards and dissatisfactions of intravenous dye excretion urography are much emphasized in some quarters, but we consider it an excellent and relatively safe method of examination. Few fatalities among many thousands of injections have been reported from dye sensitivity or other cause. Ocular, intradermal, and sublingual, and tiny dose intravenous tests have been advocated, and these help detect the patient who might react unfavorably. Filling the syringe with blood to mix with the dye has been advocated recently, but we have practiced the opposite for years, trying to keep the blood separate and inject only the dye. This factor would seem, then, to be unimportant. We try to break up the dye volume into small portions by stopping the injection after every 3 to 5 cc. and having the patient take a long, deep, slow breath to draw the venous blood and dye into the chest before the injection is resumed. This distracts and relaxes the patient. Allaying fear may be important. We have had no serious reactions for several years, and never any fatalities. We have used all the dyes commonly on the market and found them satisfactory. We are now using Urokon sodium. The use of single dose ampules is desirable to avoid contamination and deterioration of the dye.

Although adequate films can often be obtained in emergency without any preliminary preparation of the patient, we consider a thorough cleansing of the colon by catharsis or enemas the evening previous, the taking of no fluids (this includes enemas) after 10 p.m., and a fasting stomach helpful. The moderate resultant dehydration helps produce concentrated dye excretion (figures 6a and 6b). If bilateral marked impairment of kidney function exists, pale shadows will be obtained even after the most meticulous preparation. Usually even here the tract is sufficiently outlined to detect gross abnormalities. Intravenous pyelography is not, however, recommended under such circumstances.

After taking a film at 5 and 15 minutes following the injection of dye, we attempt to block the ureters by pressure over the sacroiliac regions with a longitudinally placed hard-rolled folded hand towel held in shape with rubber bands, or some similar object, cinched in place with the compression band on the x-ray table. Where to place the towel roll can be judged by the position of the ureter seen on the 5 and 15 minute films. Pressure is maintained for about 5 minutes. With luck and painstaking technique, complete filling of the pelvis, calyces, and upper ureter can often be obtained. Direct anteroposterior and then three-quarter oblique views of the two kidneys are made separately. A lateral view also at times is desirable. The pressure is now released completely. A posteroanterior angle view of the full bladder is made. The patient gets up from the table, and a full tract view is made in the standing position. The patient then empties the bladder as completely as possible. A complete anteroposterior of the urinary tract and a posteroanterior angle view of the empty bladder are made. This combination of films usually gives all the available information, unless one kidney is not functioning or functions only poorly, in which case interval films are made up to 3 or 4 hours, occasionally revealing a hydronephrosis or a ureteral stone not visualized earlier. The bladder films are made because they may reveal stones, diverticula, tumors, pressure distortions from small pelvic masses, residual urine, and evidence of prostatic hypertrophy and vesicle neck obstruction. If the patient undergoes the hazard of an injection, we suggest that a full complement of films be made so that all available information, positive or negative, can be recorded, especially at the time of the first examination. Subsequent examinations may be made to investigate one phase or region only.

Careful interpretation of such a set of films often reveals everything that can be found by cystoscopy and retrograde examination. If good outlining is obtained and the findings are negative, it seems reasonably safe to proceed with expectant treatment, checking again with intravenous dye excretion urography after an interval. Repeated dye injections do not seem to increase the percentage of reactions. If there are definite positive findings, it is not necessary always to check by retrograde pyelography. A repetition by the intravenous method may be made. Such repeated examinations, within the limits of safe x-ray exposure, have been used without untoward effect.

FIG. 1

FIG. 2

FIG. 3

FIG. 4

*Figure 1.* Urinary tract of an adult male with persistent pyuria. Note the encrusted orange-wood stick casting a shadow in the bladder region on plain film.

*Figure 2.* Small kidney stone and large gallstone, taken from the same patient at autopsy, compared to the bones of the hand. Most urinary calculi are radiopaque, as is this one.

*Figure 3.* Bladder region of adult male. Note stone in lower part of ureter, pointed out by excreted dye, with urine backed up behind stone, differentiating the stone from surrounding phleboliths.

*Figure 4.* Complete rupture of the left kidney revealed by intravenous dye excretion urography, one hour after injury. Young boy fell while playing football, the kidney region striking curbstone; another boy fell over him. Patient in partial shock; bloody urine.

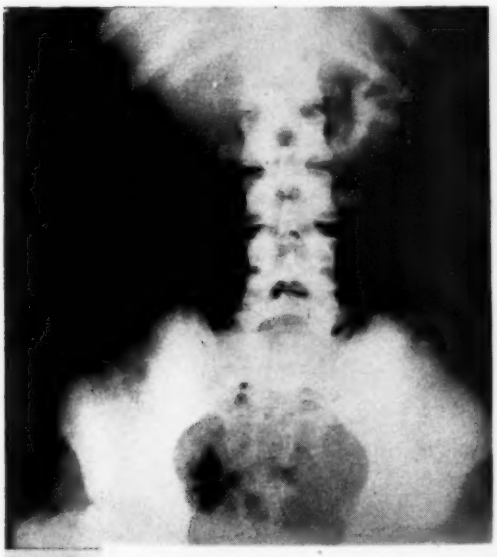

FIG. 5a

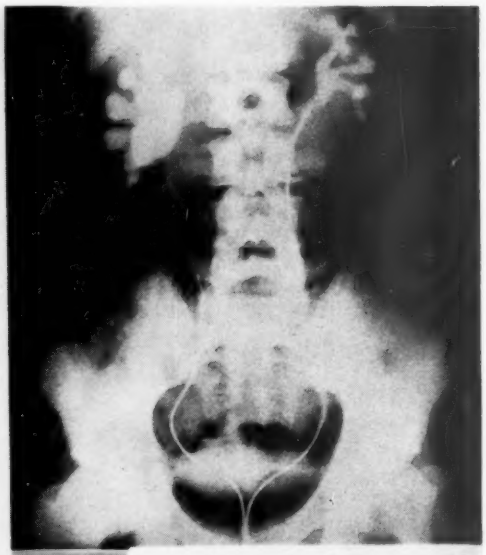

FIG. 5b

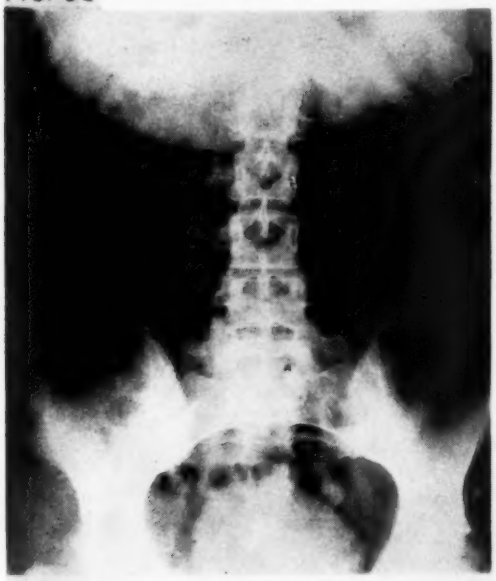

FIG 6a

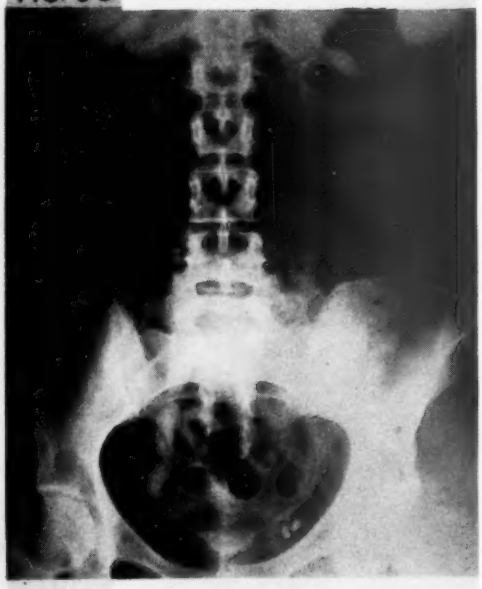

FIG 6b

*Figure 5a.* Non-functioning right kidney shown by intravenous dye excretion urography. Film taken 10 minutes after dye injection.

*Figure 5b.* Same patient as 5a. Hydronephrosis on the right, revealed by retrograde pyelography as the cause of non-function. Waiting and taking films 3 or 4 hours after the intravenous dye might have revealed the hydronephrosis by delayed dye excretion.

*Figure 6a.* Poor visualization of kidneys when intravenous dye was given immediately after an unsuccessful attempt to catheterize the ureters, two glasses of water have been given to make the urine spurt from the ureteral orifices. Bladder only is well outlined by dye.

*Figure 6b.* Same patient as 6a. Excellent visualization of kidneys on following morning after proper dehydration. Large filling defect, due to a tuberculous abscess, revealed in upper pole of kidney on right. The wide lumened stiffened right ureter, partially blocked at its lower end, is fully outlined.

*Retrograde injection contrast urography* is a useful final or check examination, used at the discretion of the urologist. Its greatest advantage, besides direct visibility of the bladder and ureteral orifices with the urine flowing from them, is that the pelvis and calyces can be more completely filled with more concentrated dye; and a functionless kidney interior can be visualized, if a passage way to it can be found. The disadvantages are that the patient is often uncomfortable or uncooperative and does not easily remain immobile during x-ray exposures and the films are often made with a small accessory x-ray unit and may not give the best definition. Errors on unsatisfactory films may occur here, as well as with the other methods of examination. Recheck of doubtful findings should always be done. Intravenous dye excretion urography is sometimes useful for checking. Kidneys should not be removed for small or controversial lesions, unless the findings are confirmed by repeated examination. The patient has only one kidney to lose. Incomplete filling due to spasm or other causes may produce appearances suggesting an organic lesion. The prognosis in renal malignant lesions, no matter how early detected and removed, is not very hopeful at best (figure 7). Early tuberculosis of the kidney may be cured by appropriate rest and care. Therefore, a few days' delay to check findings seems justified before removing a kidney in doubtful cases.

*Figure 7.* Female, age 61. Painless hematuria. Defect in the lower outer part of the left kidney pelvis, revealed by intravenous urography. Kidney removed immediately. Defect due to carcinoma, primary. Patient died within two years with pulmonary and pleural metastases.

## Conclusions

Plain films of the urinary tract often reveal significant findings.

Intravenous dye excretion urography gives a wealth of information and, if at first unsatisfactory, should be repeated with more meticulous preparation of the patient. The additional films will often clear up doubtful points. There are many variations of the normal as well as the pathologic.

Finally, significant findings can be checked or small lesions searched for by retrograde injection contrast urography at the discretion of the urologist. Doubtful findings here, too, should be checked. It is far better to wait a few days or weeks and reexamine the patient in order to confirm the presence of a tiny or doubtful lesion than to remove a normal kidney.

# Problems in Pediatrics

Mary B. Olney, M.D.

Whether a year marks frustration or fruition of the effort to advance knowledge depends frequently upon the receptiveness of the times and not necessarily upon the import of the work or the great labor and thought involved. This article presents a few of the current problems in pediatrics.

## Retrolental Fibroplasia

Terry[1] in 1942 observed retrolental fibroplasia in newborn small premature infants. Bringing this condition to attention encouraged its differentiation from persistent hyperplastic vitreous (which is unilateral) and from retinal dysplasia (which is bilateral and associated with multiple congenital anomalies rather than prematurity). Hepner, Krause, and Nardin[2] reviewed the increasing incidence of retrolental fibroplasia since the first case was seen at Chicago Lying-In-Hospital in 1937; from 1937 to 1945 it occurred in 6.8 percent of all survivals less than 1,600 Gm. at birth; from 1946 to 1948, in 30.4 percent in the same weight group. The survival rate in that weight group remained the same from 1937 to 1948. Owens and Owens[3] described the active phase of the disease (between the third and fifth week) with dilatation of the retinal vessels, hemorrhage, vascularization over the retina and vitreous, and transudation which subsides between the third and fourth month. The cicatricial stage then occurs. The pupil reveals opaque tissue which does not respond satisfactorily to surgical removal. Vitamin E therapy has not been satisfactory. In the active phase encouraging results have attended the use of ACTH, as used by Reese and Blodi[4] and Silverman and Day. The experimental dosage was 20 to 25 mg. daily for 14 days. Cases showing reactivation were re-treated. Routine ophthalmoscopic examination of all small premature infants periodically in the nursery is indicated so that treatment can be instituted in the acute and reversible stage. The use of ACTH is not without side effects of tachycardia, glycosuria, and electrolyte imbalance.

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## Megaloblastic Anemia

In 1946, Zuelzer and Ogden[5] described megaloblastic anemia in the 5 to 11 month age group emphasizing the insidious onset, anorexia, and pallor. Without examination of the marrow this anemia may be thought to be secondary to iron deficiency or on a nutritional or infectious basis. May and his associates[6] have undertaken studies of the deficiencies of vitamin $B^{12}$ and folic acid which produce megaloblastic marrow, and list (1) deficient diet; (2) altered bacterial flora in the intestine; (3) impaired gastric function; (4) impaired intestinal absorption; (5) defective intermediary metabolism; (6) unusual requirements (infection, rapid growth, prematurity, imbalance or loss of "sparing effects," and presence of inhibitors or antagonists), and (7) inadequate stores from the mother.

The observation of scurvy associated in high incidence with megaloblastic anemia prompted a series of experiments which indicated that a chronic deficiency of ascorbic acid leads to a deficiency of folic acid or some difficulty in the metabolism of folic acid or related compounds which resulted in a megaloblastic pattern in the marrow. Pure vitamin $B^{12}$ and refined liver extract containing significant amounts of $B^{12}$ but only a few micrograms of folic acid can cure megaloblastic anemia. Vitamin $B^{12}$ without folic acid is ineffective. Recommended empiric therapy is ascorbic acid (200 mg.), folic acid (5 mg.), and crude liver extract (2 cc., 2 USP units) given intramuscularly daily.

## Congenital Anomalies

Prenatal influence on the fetus in the first trimester by virus infections and the experimental production of congenital anomalies have revised lay and medical thought concerning these conditions. Gregg[7] directed attention to the post-measles, linear configuration, under-developed child with various combinations of the following defects: congenital cataracts, mental deficiency, deafness, and cardiac or great vessel defects. Warkany,[8] and Wilson and Warkany,[9] produced anomalies by depriving pregnant animals of riboflavin, vitamin D, or vitamin A. Deprivation of vitamin D produces bowing of the bones of the forearm and legs. Deprivation of riboflavin products cleft palate, syndactylism, fusion of

ribs, and shortening of the jaw and of bones of the forearms and legs. Deprivation of vitamin A produces anomalies of the eye, heart, diaphragm, kidneys, and urogenital organs. Duraiswami[10] by injection of insulin into the yolk sac of fertile eggs, in varying dosages at varying periods, was able to produce many orthopedic congenital anomalies: club foot, congenital dislocation of the hip, achondrodysplasia, fragilitas ossium. Furthermore, by breeding some of the acquired defects he was able to reproduce them. Ingalls[11] with low oxygen tension produced skeletal anomalies. These developments prompt interest in the pregnant woman in the first trimester and alleviate the stigma of the belief that all congenital anomalies are on a genetic basis. The experimental production of anomalies will provide opportunity for study of associated defects.

### Correction of Anomalies

The improvement in anesthetic procedures[12] and the dependability of antibiotics have made feasible corrective surgery at an early age. Procedures for correction of hernias, cardiac anomalies, cleft palates and lips, tracheo-esophageal fistula,[13] and megacolon (as examples) are well established.

### Antibiotics

The value of culturing the blood and body secretions is due for strong re-emphasis because of the need for determining the sensitivity of the organisms to varying levels of numerous agents. Further applicability of the sensitivity of the organisms to various antibiotics is made in aerosal therapy in infectious croup, fibrocystic disease, severe bacterial type asthma, and advanced pulmonary tuberculosis.[14]

### Diagnostic Procedures

Where bone marrow punctures are necessary the iliac crest puncture technique of Rheingold, and others[15] is very helpful. The paucity of marrow in the sternum and the real danger of pericardial puncture and subsequent ventricular fibrillation make sternal puncture ill-advised.

Where criteria for the diagnosis of rheumatic fever activity are needed, the sedimentation rate may well be supplanted by the anti-streptolysin titer,[16] and by the determination of serum mucoproteins,[17] which parallel the degree of activity of the disease process.

Where a test is needed for screening for fibrocystic disease of the pancreas, the use of unexposed x-ray film for evidence of enzymatic digestion of the gelatin emulsion is very helpful.[18] The test tube gelatin method eliminates false positive reactions.

There is increasing awareness of the importance of identifying reducing substances in the urine of infants. Identification of galactose confirms the diagnosis of a clinical entity characterized by galactosuria, galactosemia, and hepatomegaly, with icterus as a common complication. Extreme intolerance to galactose in an infant on a milk diet may lead to an early death. A milder disturbance may cause only severe malnutrition or lamellar cataracts. The pathologic changes supposedly are reversible in the early stages. The galactosuria, galactosemia, and hepatomegaly can be eliminated by discontinuing milk feeding.[19,20] Identification of cystine or other proteins may confirm errors in protein metabolism.

As an aid to understanding the function of the adrenal gland, the classification of hyperadrenocorticism, the differentiation of types of heterosexual development, the differentiation of male types of sexual precocity, the possible causes of symptoms in Cushing's syndrome, one may well turn to the panel discussion of Jacobsen, and others.[21]

### Ingestion

Curiosity of children plus their great desire to mimic adults brings about an annual toll of deaths from poisonings, which continues to be alarming despite the admirable efforts of the insurance companies and the National Safety Council in attempting to cut down accidental deaths in children. Some of the more interesting complications of over-ingestion are observed in vitamin A toxicity,[22,23,24] which appears in late infancy and early childhood and is characterized by anorexia, weight loss, irritability, pruritis, low-grade fever, rash, hepatomegaly, tenderness over the long bones, and painful soft tissue swelling. The x-ray examination of the bones show periosteal proliferation and cortical thickening. Laboratory examination shows normal serum calcium and phosphorus. The diagnosis may be made by the high levels of vitamin A shown by a vitamin A tolerance test.

Toxic affects of the antihistaminic drugs are becoming better known and are classified as nervous, gastro-intestinal, cardiovascular, respiratory, genito-urinary, cutaneous, and hematologic. Wyngaarden and Seevers[25] report 8 fatalities in children under two years, in five of whom convulsions occurred.

Because of the high incidence of anemia and the prevalence of administration of ferrous sulphate, ingestion of ferrous sulphate tablets is very likely to occur. The results in the child are extremely alarming, with pallor, drowsiness, vomiting, a period when the child seems to improve, and then bloody diarrhea, collapse, and death. Erosion of the gastric

mucosa has been reported. Lavage and use of sodium bicarbonate are extremely important, and should be followed by intravenous glucose and, if indicated, by transfusions.[26] A review of accounts of the ingestion of various substances suggests methods of prophylaxis against recurrence of similar accidents.[27] The use of boric acid in solution in the nursery continues to provide accidents which are of extremely serious nature in that death from intoxication is rapid, occurring within 19 hours to five and one half days, with gastro-enterocolitis, hepatitis, nephrosis, and cerebral edema.[28]

### Iron Metabolism

A much more clear concept of the metabolism of iron is evolved with a clarification of the role of iron stores.[29,30] Intravenous iron saccharide can be given to replace iron stores with dramatic benefit on the anemia. Economically this is an extremely important method for correction of anemia, inasmuch as blood is not always readily available. The possible use of intravenous iron to prevent anemia in premature infants is to be worked out.[31]

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# Regional Enteritis

Dorothy A. H. Chess, M.S., M.D.

REGIONAL ENTERITIS appears to be either increasing in frequency or to be more often recognized. Since it was first established as a definite clinical entity in 1932 by Crohn and his associates,[1] who called it "regional ileitis," numerous reports have been made by clinics everywhere. Recent figures indicate that as many cases were recognized in the last two years as in the previous nineteen.[2] With increased attention being focused upon this interesting condition it has been shown that the pathologic process which was thought to occur only in the terminal ileum may involve any part of the small intestine and even the colon. Often multiple areas of involvement are found with apparently normal or "skip" areas between parts of inflamed intestine and mesentery. Accordingly the name was changed from "terminal ileitis" to "regional ileitis" and finally to "regional enteritis," which last seems to be the most appropriate designation. Although the clinical picture is now quite clearly defined,[3] the etiology and pathogenesis are obscure and the treatment is, therefore, controversial.

## Symptoms and Signs

In forty clinical cases reported last year[2] the following symptoms and signs were found:

| *Symptoms and signs* | *Percent* |
|---|---|
| Cramping pain in abdomen | 90 |
| Tenderness in right lower abdomen | 85 |
| Diarrhea | 74 |
| Partial bowel obstruction | 74 |
| Nausea and vomiting | 74 |
| Loss of weight | 70 |
| Weakness | 62 |
| Fever | 60 |
| Leucocytosis | 60 |
| Anorexia | 50 |
| Anemia | 47 |
| Blood in stool | 47 |
| Palpable mass in right lower abdomen | 41 |
| Elevation of sedimentation rate | 30 |
| Skip areas | 24 |
| Previous appendectomy | 21 |
| Fistulas, internal and external | 12 |
| Acute intestinal obstruction | 12 |
| Massive hemorrhage | 2 |

## Etiology and Pathogenesis

Efforts to identify a specific bacterium as the etiologic agent in regional enteritis have been unsuccessful. Some investigators think that the tubercle bacillus is the cause of the disease because the pathologic findings are similar to those of tuberculosis.[4] On the basis of clinical and experimental evidence, the following organisms, agents, and/or conditions have been suspected: bacteria (Escherichia coli, Shigella dysenteriae, and all other organisms which are capable of inhabiting the intestinal tract either normally or in pathologic states), bacterial toxins, animal parasites, viruses, allergy, sarcoid, achylia gastrica, foreign bodies, blockage of lymph channels, impairment of blood supply, trauma, appendical inflammation, neurotropic disturbances, hormone imbalance, and vitamin deficiency. Anxiety and emotional instability seem to be important predisposing factors, as in ulcerative colitis.[5]

Interest in the problem of the pathogenesis of this condition was stimulated by the report of Reichert and Mathes[6] who produced pathologic changes indistinguishable from those of regional enteritis by injecting the lymphatics of the small bowel mesentery of dogs with finely divided sand and other sclerosing solutions. Their work and the negative bacterial studies suggest that factors other than infection may play a part in the pathogenesis. This is in accord with the work of Pumphrey[7] and of Coffey[8] who commented on the presence of "a crystalline material" in the foreign body giant cell of the lesion.

The fact that inert foreign material, such as sand in a finely divided state, can be absorbed from the digestive tract to the detriment of the organism is not generally appreciated. In 1942, Webb, Selle, and Thienes[9] studied the absorption, accumulation, and excretion of ingested silica from a chemical viewpoint. They fed four groups of rats a diet containing 1 percent finely divided sand for 10 months, and found that the ingested silica can be accumulated mainly in two organs, the liver and spleen. In 1945, Tebbens, Schulz, and Drinker,[10] investigating the potency of silica particles of different size when injected intravenously into the ear veins of rabbits, found at the end of 18 months that the livers of these animals were almost wholly replaced by fibrous tissue. It appears to be quite well substantiated, therefore, that when finely divided silica is administered either intravenously or into the digestive tract it is deposited rather widely in the tissues. If this occurs in sufficient quantity or for a sufficient period of time, the organs in which the material is deposited suffer serious injury.

It was theorized, therefore, that if silica particles can be absorbed by the lymphatics of the lung to produce the disease of silicosis, the lymphatics of the intestine should be able to take up silicious ma-

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terial more easily, since intestinal lymphatics are developed for the purpose of absorbing substances from the lumen of the bowel. This thought might be applied especially to the terminal ileum where the lymphatics are relatively more numerous than elsewhere in the digestive tract and where, because of the presence of the ileocecal valve and the normally occurring reverse peristaltic waves, there is a delay in the passage of intestinal contents. To test this theory, sand and talc were fed to dogs and rats and placed into isolated loops of terminal ileum for varying periods of time. Metabolic studies were made and some animals were given, in addition, injections of bacteria. Results of this work were reported.[2,11] Hyperplasia of the lymphoid tissue of the small bowel, regional mesenteric lymph nodes, and microscopic granulomatous lesions of the liver, as well as systematic and metabolic changes, were observed. On the basis of this work and the investigations of others mentioned, a theory as to the pathogenesis of regional enteritis was presented which ascribes the pathologic process to the presence of ingested material having the property of piezoelectricity and relegates the factor of bacterial invasion of the tissues to a place of secondary importance. Piezoelectric materials, e.g., quartz crystals, the phospholipid capsule of the tubercule bacillus, heated aluminum phosphate, cholesterol, and numerous other such substances, when introduced into living animal tissues, have the property of exciting a proliferative cellular response which is the granuloma, whether it be the tubercle of tuberculosis, the Aschoff nodule of rheumatic disease, the granuloma produced by laceration with a broken fluorescent light bulb, talc granuloma produced by the hand of the surgeon, or granuloma of regional enteritis.

## Pathology

Most pathologists feel that although regional enteritis, sometimes called "chronic cicatrizing enteritis," is a clinical entity, it is not a pathologic entity. For resected specimens of bowel taken from patients with regional enteritis they therefore report "chronic inflammation" or some similar diagnosis. A notable exception is Hadfield[12] who felt that the submucous lymphoid hyperplasia which occurs in regional enteritis is the most important single pathologic feature. Other features are reddened, granular serosal surface of the bowel, greatly hypertrophied mesenteric lymph nodes, and turbid peritoneal fluid in the acute stages; alternately hypertrophied and constricted and scarred segments of intestine in the more chronic forms in which there is partial obstruction causing the "string sign" on x-ray examination of the intestine with barium; the "cobblestone" appearance of the mucosal surface; and the microscopic appearance of "chronic inflammation," i.e. the granuloma with "foreign body" giant cells.

## Treatment

In addition to the usual preoperative and postoperative treatment, various forms of chemotherapy have been employed, including the sulfonamides, penicillin, and streptomycin. These drugs were found to have no apparent value except as adjuncts to the surgical management of the disease.

It is now generally agreed that in the acute stages of the disease, nonoperative or conservative treatment is indicated. A large percentage of patients get well after an acute attack. Many go on to the chronic stages of the disease with its complications of intestinal obstruction, great debilitation, hemorrhage, anemia, and fistula formation. For the chronic stages of the disease, short-circuiting operations with exclusion of the involved segment have given as good results as resection of what appears to be the entire diseased area and with less mortality and morbidity.

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# Immunization Procedures

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THE TREMENDOUS REDUCTION in mortality from communicable disease that has occurred in the past 50 years has been due largely to three lines of endeavor: (1) attacking the agent of disease; (2) strengthening the defenses of the host; and (3) improving the environment in which the agent meets the host. This paper will be concerned with the second of these endeavors. In building up the defenses of the host, a number of non-specific factors are of importance, such as adequate nutrition and vitamin intake, proper endocrine balance, good personal hygiene, etc. This discussion, however, is limited to the specific defense brought about by immunization. It will not consider the theoretical aspects of immunity, but will be devoted to a review of the procedures available for active and passive immunization in the various diseases. By active immunity is meant the development in an animal (human or other) of specific antibodies as a result of the introduction of a stimulating antigen. By passive immunity is meant the immunity received from the introduction of serum from an animal that has been rendered immune. The advantage of active immunization is that it is fairly long lasting in contrast to passive immunization which is effective for a short period of time only—usually about 3 or 4 weeks. The disadvantage of active immunization is that it takes a certain period of time before an adequate titer is built up in the blood. This may be a few days or a few weeks. In passive immunity, on the other hand, protection is afforded as soon as the immune serum is injected. The use of an active or a passive immunizing agent will therefore depend on a number of factors such as the availablity of the agent and the speed necessary for protection.

The need for immunization against the acute communicable diseases is greatest in infancy and early childhood. This is because the incidence of most of these diseases is highest in childhood, and because the younger the child the greater the risk of a fatality. It is, therefore, good public health practice to carry on programs for the early immunization of children. The aim should be to get all infants immunized against smallpox, diphtheria, tetanus, and whooping cough in the first year of life, and to keep the immunity at a high titer by booster doses every 3 years up to the age of about 10 years.

In recent years the need for adequate measures for civilian defense has been stressed all over the country, particularly in thickly populated communities. One of the requirements of civilian defense is adequate immunization against certain diseases for which protection is available. Although most authorities do not consider the time ripe for mass immunization against diseases like typhoid or tetanus, knowledge about immunizing procedures is important. For this reason, there will be included in the discussion which follows, methods used in the protection of individuals against diseases which are rare in this country, as well as against those which are more commonly observed.

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## DIPHTHERIA

Numerous studies have attested to the value of active immunization in the prevention of diphtheria. Experience in World War II has added to the evidence. Immunization programs in the central European countries, Holland, Belgium, and France broke down as a result of the war. Norway and England had never done much immunization. Hungary, which had always been a well immunized country, continued its program. When the wave of diphtheria struck the countries about 1940 it created havoc. Hundreds of thousands of cases were reported and the fatality rate was high. In 1943 alone about a million cases and 50,000 deaths occurred. Hungary had only a slight rise in incidence. In England an immunization program was expanded with the result that the epidemic hardly affected it. The brunt of the epidemic fell on Germany, Austria, and the invaded countries.[1]

### *Immunity*

An attack of diphtheria usually confers immunity on the patient. Such immunity is, however, not so solid as in measles or chickenpox, so that second attacks are not rare. In a population where diphtheria is endemic the adult population is usually found to have considerable immunity. This is probably due to subclinical infections which are constantly occurring. It is possible that the prevalence of non-virulent diphtheria bacilli may also contribute to the immunization of a population. The immunity obtained

by a woman is passively transferred to her child, which is born immune and which remains so for the first half of its life, the immunity gradually receding. In children susceptibility to diphtheria is very high.

*Active Immunization*

Several antigens are available for active immunization against diphtheria. The first to be used was *toxin-antitoxin,* a mixture of toxin and antitoxin with a slight preponderance of the former. Although it is an effective immunizing agent, it has several disadvantages: (1) Only about 85 percent of those injected are immunized; (2) the immunity took from one to several months to develop; (3) the presence in the mixture of antitoxin, which is a horse serum, permitted sensitization or the development of a reaction in sensitized persons; and (4) certain physical conditions, like freezing, allowed the mixture to dissociate and cause severe toxic manifestations. It was administered in three doses of 1 cc. each at intervals of one to two weeks.

*Fluid toxoid, or anatoxin* as it was originally called by Ramon, who introduced it, is toxin modified by the addition of formalin and heat until the toxicity is lost. The antigenic potency, however, remains. It is usually administered in three doses of 1 cc. or 0.5 cc. each at intervals of about a month. The percentage of injected children immunized is higher than 90 percent and the other disadvantages of toxin-antitoxin are eliminated.

*Alum precipitated toxoid* was the next antigen to be introduced. It consists of fluid toxoid to which alum has been added. The alum holds the toxoid as a repository in the tissues at the point of injection and allows for slow absorption of toxoid and increased antigenicity. Two doses of 1 cc. each are given at an interval of about a month. The percentage of immunized individuals rises to between 95 and 98 percent with the use of this antigen. It is somewhat more irritating than fluid toxoid and occasionally causes a swelling, the so-called "sterile abscess" at the site of inoculation, which may persist for several weeks.

Several modifications of toxoid have been experimented with, chieflly in order to eliminate reactions. In England, a mixture of toxoid and antitoxin, known as TAF (toxoid-antitoxin floccules) is fairly popular, but it is not used in this country. The chief immunizing agents used in this country are alum precipitated toxoid and fluid toxoid, in that order.

There has been considerable discussion as to the age when immunization against diphtheria should be begun. There are two disadvantages to giving it too early in the child's life. One is that very young infants do not seem to have as good an antibody production mechanism as older infants and children.[2] The second objection is that the antitoxin present in the young infant's blood tends to fix the injected toxoid and prevents it from reaching the cells where the stimulation of the antibody-forming mechanism takes place.[3] If diphtheria immunization alone is used, a good age to begin is from 6 to 9 months.

The use of combined antigens for the immunization against diphtheria and tetanus or diphtheria and whooping cough or all three has been increasing in popularity. Such mixtures as well as the time of administration and the dosages will be discussed under "Pertussis."

There have been several reports on the duration of immunization after the primary series. There is evidence that loss of antitoxin titer begins fairly soon and decreases very gradually.[4] However, more than 35 percent are still immune at the end of two years and a considerable percentage of the immunized group continues to be immune for as long as five or six years.

Experiments indicate that when an individual has been immunized against diphtheria and the titer of antitoxin in his blood has diminished after some years even to a point where it is not measurable, the injection of a small amount of the immunizing agent will raise the titer of the immunity to its original level, or even higher, in five to ten days.[5] Such an injection is known as a *booster or reactivating or recall dose.* Only a very small amount need be injected. Even the performance of a Shick test may introduce enough antigen to raise the titer. In practice, the dose used is 0.1 to 0.2 cc. It is considered good public health practice to give a booster dose of fluid diphtheria toxoid every three years after the primary series until the child is 10 years old.

Primary immunization with diphtheria toxoid of individuals above the age of 10 years is often accompanied by severe reactions. Although such reactions have not been known to cause death they cause symptoms which are uncomfortable and disturbing. The reaction is apparently due to protein material in the toxoid. By removing this and immunizing with purified toxoid, the frequency of reactions is reduced. However, a small group of individuals shows sensitivity to the toxoid also, and injection of full doses may cause severe reactions. Fortunately such individuals are readily immunized by small doses.[6]

If individuals above the age of 10 years who have not been previously immunized are to receive

a primary series of diphtheria toxoid, it is wise to test them for sensitivity. This is done by the Moloney test and consists of an intradermal injection of 0.1 cc. of 1 to 10 dilution of fluid diphtheria toxoid. A positive result is indicated by an area of erythema at the site of injection in 24 to 48 hours. Moloney-positive individuals can be immunized safely by starting injections with 0.1 cc. of fluid toxoid subcutaneously; if no reaction occurs, the second dose of 0.5 cc. is given in a month, and the third dose of 1 cc. is given a month later. If more than a mild reaction to any one dose occurs the subsequent dose should be the same or one-half the last dose.

*Schick Test*

To determine the exact amount of antitoxin an individual has in his circulation it is necessary to titrate the blood serum. This is a laboratory procedure and requires expert technical assistance. A much simpler, although a cruder method, is to perform a Schick test. Diphtheria toxin so diluted that 1/50 M.L.D. (minimum lethal dose for a guinea pig weighing 250 Gm.) contained in 0.1 cc. of the solution is injected intradermally in the forearm. If no antitoxin is present in the circulation this amount of toxin will cause a local reaction at the site of inoculation. If antitoxin is present, it will neutralize the injected toxin and no reaction will occur. Reactions are usually read 3 to 4 days after injection. Since filtrates of the cultures of diphtheria bacilli contain other substances in addition to toxin and since these substances may also cause a local reaction, it is necessary to control the Schick test. This is done by injecting in the opposite arm the same material after heating to 60 C. for 15 minutes. Such heat will destroy the toxin but not the other proteins. The resulting reactions after performing the Schick test and control are graded as:

(1) *Positive.* At the site of toxin injection there occurs an area of redness beginning about 24 hours later and increasing for several days. At the end of 3 to 4 days there is both redness and infiltration of the skin. After about a week it fades, turns brown, and usually desquamates and disappears, leaving behind a pigmented area which persists for several weeks. The control arm shows no reaction. A positive reaction indicates the absence of an effective amount of diphtheria antitoxin in the circulation.

(2) *Negative.* Both arms show no reaction. This indicates that sufficient circulating antitoxin is present to render the individual immune to an ordinary exposure to diphtheria.

(3) *Pseudoreaction.* An area of redness appears on both arms in about 18 to 20 hours and increases for another 6 to 18 hours, but does not become infiltrated, and disappears at both sites in about 3 to 4 days after the test. This reaction indicates immunity, but indicates also sensitiveness to some proteins in the injected material.

(4) *Combined reaction.* This is a combination of a positive and a pseudoreaction. It consists of a positive reaction in the arm injected with toxin and a pseudoreaction in the arm injected with the control. Its interpretation is an absence of an effective amount of diphtheria antitoxin in the circulation and a sensitiveness to proteins in the antitoxin solution.

The Schick test is a valuable tool since it can easily be performed in the field or in a physician's office and gives a fairly good indication of the immunity of the person tested. However, it takes a certain amount of time and material to perform; it requires the return of the tested individual for a reading, and it means an extra visit and injection for those found to be Schick positive. The vast majority of children above the age of one year are usually Schick positive. In public health practice it is therefore considered uneconomical to do Schick tests. All infants are immunized during the first year. They are given a booster dose every three years thereafter, up to the age of ten years. The booster dose is as simple to do as a Schick test, and it eliminates the extra visit and does no harm even if the child is Schick negative.

Individuals above the age of 10 years who require primary immunization because of special exposure to diphtheria should be Schick-tested. If negative, nothing further need be done. If positive, one should proceed as outlined above.

*Passive Immunization*

Individuals who are exposed intimately to a case of diphtheria should be immunized. If they have previously received a primary series, a booster dose is all that is necessary. If they have not been previously immunized, they should receive an injection of diphtheria antitoxin. The dose is 500 units for small children and 1,000 units for older children and adults. Such immunity lasts for three or four weeks only. Children receiving such prophylactic immunization should be actively immunized with diphtheria toxoid, beginning about a month after the administration of the prophylactic antitoxin.

## Tetanus

*Active Immunization*

The effectiveness of immunization against tetanus was well demonstrated in World War II, when all American troops were immunized actively. Only 12

cases of tetanus occurred and in only four of these had the patients received a full primary immunizing course as well as a booster dose. The tetanus rate was 0.44 per 100,000 wounded and injured, as compared to 13.4 per 100,000 in World War I.[7] In the Japanese army and navy the rate from 1940 to 1944 was 10 per 100,000 wounded. Active immunization may be performed, as in diphtheria, with fluid or alum precipitated toxoid. The dose is 1 cc. every 4 to 6 weeks for 3 doses with fluid, and 2 doses with alum toxoid. This may be started early in life, since even young infants respond well to the injections.[8] A booster dose of 1 cc. of fluid toxoid should be given after injury. Since it takes about 4 days for the titer to rise to a high level after a booster dose, and since fulminating cases of tetanus may occur when contaminated material is driven into the central nervous system, the physician must decide in each instance whether the case is sufficiently serious to warrant the use of antitoxin in addition to the booster dose.

Tetanus toxoid may be combined with diphtheria toxoid or with pertussis vaccine or both in a single immunizing mixture. This will be discussed under "Pertussis."

*Passive Immunization*

Individuals who have not been actively immunized should receive a prophylactic dose of 1,500 units of *tetanus antitoxin* if they are injured or suffer a laceration or burn.

## Pertussis

*Active Immunization*

Although there are still some investigators, particularly in England, who question the efficacy of pertussis vaccine as an immunizing agent, the prevailing opinion of American workers, based on field studies, is that a vaccine made from phase I pertussis bacilli has definite value in the prophylaxis of whooping cough.

The disease takes its greatest toll in very young infants. From 50 to 60 percent of all deaths occur in infants under 6 months of age, and about 80 percent of all deaths, in infants under one year of age. It is obvious, therefore, that protection should be begun very early in life. Attempts have been made to immunize newborn infants with pertussis vaccine, but the results indicate that only about half of them attain a satisfactory immunity and that this declines rapidly. Immunization is more effective if started at 3 to 4 months of age, and the maximum titer can be maintained if a booster dose is given six months to a year following the initial series. There is also evidence that alum precipitated vaccine is superior to fluid vaccine and can be given in a smaller total dose.[9] The recommendation, therefore, is to begin pertussis immunization at 3 months of age with an alum precipitated vaccine. The total dose should equal 45 billion bacteria given in 3 doses of 15 billion each at monthly intervals. If fluid vaccine is used a minimum of 80 billions organisms must be administered. This is usually prepared in a dose of 20 billion organisms per cc. so that the first dose is 1 cc. and the second and third doses 1.5 cc. each. A booster dose of 1 cc. of fluid vaccine should be given at one year of age, whether fluid or alum precipitated vaccine is used in the primary series.

*Passive Immunization*

For a number of years a hyperimmune serum has been used to protect contacts to cases of whooping cough who have not been actively immunized against the disease. This is obtained from individuals who give a history of having had whooping cough and who are hyperimmunized with a pertussis vaccine prior to bleeding.[10] The serum can be obtained from the Philadelphia Serum Exchange and is given in a dose of 20 cc. A gamma globulin, derived from such serum, is also available on the market and has the advantage that it can be given in a dose of 2.5 cc. The immunity conferred lasts about three to four weeks. Both the serum and the globulin may also be used in treatment. Children exposed to cases of whooping cough who have been previously immunized actively should be given a booster dose of 1 cc. of fluid pertussis vaccine.

*Combined Immunization*

A number of studies have pointed up the advantage of using a combined immunization procedure, not only because it lessens the number of necessary injections and saves time and discomfort for the child, but also because there is an enhancing effect. This offsets to some extent the disadvantage of administering diphtheria toxoid in the mixture at an early age when its immunizing effect is not so great as later. Furthermore, if a booster dose is given six months to one year later, the titer of diphtheria antitoxin rises sufficiently to compensate for the prebooster difference.[11] Several combined immunization mixtures are on the market. The one recommended is an alum precipated mixture of pertussis vaccine and diphtheria and tetanus toxoids. It is given in three monthly doses of 0.5 cc. each, beginning at 3 months of age. A booster dose of 0.5 cc. should be given at one year of age. Such a mixture contains 45 billion pertussis organisms and sufficient diphtheria and tetanus toxoids for immunization.

*Reactions*

There are very few reactions from the use of diphtheria or tetanus toxoids in children under 10 years of age. Reactions in older children and adults are common and are discussed under "Diphtheria." Reactions to tetanus toxoid occurs in a small percentage of adults but are not of serious consequence.

The injection of pertussis vaccine, even in young infants, causes a certain amount of pain. This is more marked when alum precipitated vaccine is used. However, the pain passes fairly quickly. The occurrence of a "sterile abscess" is more common with the use of alum than with the use of fluid vaccine. As a rule, it requires no treatment and is absorbed after days or weeks. It can be minimized by giving deep subcutaneous injections.

The occurrence of convulsions following immunization against pertussis has been reported and the statement has been made that some of these showed residual neurologic damage.[12] The evaluation of such reports is difficult. A clear cut relationship between the immunizing procedure and the occurrence of mental symptoms has not been shown. It is interesting to note that about 30,000 infants are immunized every year in the child health stations in New York City, and the mothers are instructed to report all untoward reactions. When this happens, a diagnostician visits the patient and examines him. Not a single case of encephalopathy following pertussis vaccination has been found over a period of many years.

Recently, the English have reported an apparent adverse relationship between immunization and poliomyelitis.[13] They have indicated a greater tendency for paralysis to occur in the injected limb than could be explained by chance. The relationship is being studied in this country. It should be pointed out that poliomyelitis is not common in the under one year of age group, and in this country most physicians and clinics immunize children before they have reached the age of one year.

## Smallpox

The effectiveness of vaccination in the prevention and control of smallpox has been so well substantiated all over the world that there is no need of offering proof. Vaccination is now compulsory in many communities.

Primary vaccination should be performed at an early age, since even young infants respond with a take. It is recommended that vaccination be performed either preceding or following immunization against diphtheria, tetanus, and pertussis, and that it should not be delayed beyond the first year of life. The preferred method is the multiple pressure. A drop of vaccine is placed on the upper arm, and, with a needle held parallel to the arm, about 20 to 30 punctures are made in the skin through the vaccine. The excess can then be wiped off. No bandage is necessary and no special precautions are needed.

Three types of reaction are recognized: (1) primary take; (2) vaccinoid or accelerated reaction; and (3) immune reaction.[14] A primary take occurs in individuals not previously vaccinated and in those previously vaccinated who have completely lost their immunity. A papule appears by the third or fourth day after vaccination, changes into a vesicle at the end of a week, and becomes pustular by the ninth or tenth day. By the fourteenth day a firm crust has formed, which falls off in another week or two. At the height of pustulation there is local redness and tenderness of the skin, enlargement of the regional nodes, and often general malaise and fever. Symptoms usually last not more than one or two days.

A vaccinoid or accelerated type of reaction shows a quicker response. The papule appears in one or two days, turns into a vesicle and pustule in another two days and becomes crusted by the end of the week.

The reaction of immunity is the most difficult to read accurately. A papule forms in one or two days. No vesicle or only a tiny one forms, and there is no pustulation. A firm, indurated area should be present within three days. Unfortunately, heated, inactivated vaccine virus can produce a papule indistinguishable from an immune reaction. Such a reaction does not, therefore, really indicate immunity unless the physician is sure that the vaccine is potent and that his technique is reliable.

A report of unsuccessful vaccination should not be accepted. The individual should be revaccinated, and there should be assurance that the vaccine used is potent and the technique reliable.

*Complications*

The two complications most commonly following vaccination against smallpox are postvaccinal encephalitis and general vaccinia. The incidence of the former varies in different localities. In the United States it is uncommon. Only 45 cases occurred among 5 to 6 million people vaccinated in New York City in 1947. No method of preventing this complication is known. Generalized vaccinia rarely occurs in others than those who have eczema of the skin. Such persons should not be vaccinated while they have eczema. Furthermore, they should not be permitted to come in contact with recently vaccinated individuals, since they may be accidentally inoculated.

### Typhoid Fever

There appears to be little question that the marked decline in morbidity and mortality from typhoid fever has been caused chiefly by improvements in environmental sanitation, particularly the purification of water, the pasteurization of milk, and the proper disposal of excreta. Yet there can be no question of the effect of immunization in the prophylaxis of typhoid fever. When one considers the insanitary conditions under which our troops lived in all parts of the world in World War II, one cannot escape the conclusion that the fact that only a few hundred cases of typhoid fever occurred was due largely to compulsory immunization.

The recommended doses for primary immunization are 0.5, 0.5, and 0.5 cc. of a killed vaccine given subcutaneously at weekly intervals.[15] The immunity lasts for two to three years. Individuals who have previously been immunized need only a booster dose. The preferred method is 0.1 cc. intradermally. An alternative method is 0.5 cc. subcutaneously.[16]

A mixed vaccine, containing one billion typhoid bacilli and 750 million each of paratyphoid A and paratyphoid B bacilli, is commonly used to immunize against typhoid and paratyphoid fevers. The doses, methods of administration, and booster doses are the same as for typhoid vaccine.

#### *Reactions*

Reactions usually occur after the administration of this vaccine. They are local, consisting of redness and swelling, and general, consisting of headache, general malaise, and fever. Symptoms are not severe and usually last only for a day or two.

### Measles

There is no agent for active immunization against measles. However, children who are intimately exposed to cases of measles can be protected by the use of gamma globulin. If a sufficiently large dose is given, complete protection is afforded. A smaller dose allows a modified form of measles, which has the advantage that very mild illness will result and at the same time the child will develop a permanent immunity. The immunity conferred by gamma globulin is only temporary and lasts only three to four weeks.[17]

A dose of 2 cc. will completely protect most infants. It will cause a modification of the disease in children. It is, therefore, the ideal dosage to use generally. If one wishes to confer complete protection in children who have recently been through a severe illness or in order to keep a ward open in a hospital or institution, a dose of 0.1 cc. per pound should be administered. There are no reactions and, since it is a human product, no sensitizations.

### Influenza

In 1943-1944 a large scale vaccination program against influenza was undertaken in army personnel. This indicated an attack rate in controls from three to six times as great as in those immunized. Vaccination against influenza was therefore widely recommended. The vaccine used was a mixture of Types A and B influenza virus. In 1947, however, further studies indicated no protection in the vaccinated groups. The reason appeared to be that the virus responsible for outbreaks in that year was a variant of type A strain which was antigenically distinct. It is known that other strains exist which are immunologically distinct.

There are other objections to the use of influenza vaccine. One is that it is effective for a comparatively short time. Since the occurrence of influenza can be prognosticated only in a very general way, it would be necessary to repeat immunization to make sure that it would be effective if an epidemic occurred. Furthermore, reactions to the vaccine are common, and in children may be severe. Indeed, the reactions may be worse than the disease. Also, since the vaccine is grown on chick embroyos, there is the possibility of sensitization to egg protein in susceptible individuals and the danger of severe reactions in those already sensitized. Deaths have been reported in such individuals.

One must conclude, therefore, that at present there is no justification for the use of such a vaccine except experimentally.

### Pneumonia

There is considerable evidence that the specific polysaccharides of the pneumococcus capsule are antigenic. A vaccine made from such polysaccharides has been used effectively in protecting individuals against pneumococcal pneumonia. One must remember, however, that each type of pneumococcus is antigenically distinct. A potent vaccine against all types would have to contain the polysaccharides of all known types of pneumococci. Since there are some 75 distinct types, it is obvious that a vaccine made from all is technically unwieldy. Vaccines have been manufactured containing antigens of the common types in adults, namely, 1, 2, 3, 5, 7, and 8, and those in children, namely, 1, 4, 6, 14, 18, and 19. The immunization conferred by such vaccines does not appear for more than a week and does not reach an adequate titer in less than two weeks. In view of all these facts and the excellent response of

pneumococcal pneumonia to the antibiotics, it does not appear wise to recommend immunization against pneumonia except in selected groups.

### Rabies

Rabies in animals is still a widespread disease in the United States and its transmission to humans is an everpresent danger. The mortality from rabies is 100 percent. Prophylaxis is the only way to prevent death. Rabies control measures include other than immunizing procedures, but those will not be discussed here.

The vaccine most widely used in this country is the Semple vaccine, which is an inactivated vaccine of 5 percent brain tissue. It is administered in 14 daily subcutaneous injections of 2 cc. each. The subcutaneous tissue of the arm or of the lateral aspects of the abdomen are usually used. The practice of the New York City Department of Health is to recommend immunization to individuals who have been bitten by (1) a rabid animal, (2) an animal suspected of being rabid, and (3) a stray dog or cat. If the dog is known, he is held under observation, and, if no symptoms of rabies develop in him within a week, treatment is not recommended. An exception to this is made if the bite is in the head region, since the incubation period is shorter than in a bite of the body. Even in the case of a known dog, if the bite is on the face, the person bitten is advised to take antirabic injections for a week, and the dog is kept under observation in the meantime. At the end of a week, if the dog is normal, the injections are discontinued.

#### *Complications*

The occurrence of postvaccinal encephalitis following antirabic immunization must be kept in mind. In New York City it occurs once in about 1,000 persons injected. Recovery has been the rule, but neurologic sequellae may occur. One should, therefore, not immunize against rabies unless there is a good indication.

### Botulism

This is a serious disease caused by the ingestion of botulinus toxin which is formed if the Clostridium botulinum is permitted to grow under anerobic conditions. Cases usually result from the eating of improperly canned foods. Commercial canning is usually safe. It is home-canned products that are occasionally improperly done.

A bivalent botulinus antitoxin A & B is available commercially. It is put up in a 10 cc. vial containing 10,000 units. For prophylaxis, a dose of 5,000 units is given intramuscularly. For treatment, 10,000 units are injected intravenously and repeated every 4 hours until toxicity is alleviated.

### Rocky Mountain Spotted Fever

Rocky Mountain spotted fever is a serious disease and the mortality from it, especially in adults, is high. There are endemic regions in this country, chiefly in the West, but also in Long Island. Individuals going to those areas, particularly if they will be exposed to the disease as a result of occupation or habits, should receive prophylactic injections of Rocky Mountain spotted fever vaccine. It is available commercially and should be given in three doses of 1 cc. each subcutaneously at weekly intervals, or in two doses of 2 cc. each at weekly intervals. Children under 12 are given three doses weekly of 0.5 cc. each. Booster doses should be given annually, 1 cc. in adults and 0.5 cc. in children.

### Typhus Fever, Yellow Fever, Cholera, and Plague

These diseases do not occur in this country. However, individuals traveling abroad may need protection against them. The United States Public Health Service issues a booklet "Immunization Information for Persons Proceeding Abroad" which gives the requirements for immunization in the various countries.

### Typhus Fever

This vaccine is effective against louse-borne, epidemic typhus only. It may be obtained commercially. It is administered in two doses of 1 cc. each and should be given at a 7 to 10 day interval. A booster dose of 1 cc. is recommended every 6 months to a year, as long as there is danger of typhus. The immunizations should be begun 14 to 20 days before departure.

### Yellow Fever

An effective vaccine of living virus against yellow fever is available. However, it cannot be purchased. It is administered free of charge by the United States Public Health Service to whoever contemplates a trip to a country where yellow fever is endemic. It is given in one dose of 0.5 cc. In New York City the injections are given at 67 Hudson Street (BA-7-6150). The effect is good for four years.

### Cholera

The effectiveness of this vaccine in prophylaxis has not been established beyond doubt. However, it is recommended to those traveling to an endemic

region. It is a killed vaccine of the cholera vibrio and is sold commercially. It is administered subcutaneously in two doses of 0.5 cc. and 1 cc. at a 7 to 10 day interval. It should be given 14 to 20 days before departure. Booster doses of 1 cc. should be given annually.

### Plague

The effectiveness of this vaccine is also in doubt. Two doses are given at 7 to 10 days' interval, the first, 0.5 cc., and the second, 1 cc. They should be given 14 to 20 days before departure. Booster doses of 1 cc. should be given annually.

### Tuberculosis

It is now about 25 years since Calmette and Guerin introduced the use of BCG, as a prophylactic immunizing agent against tuberculosis. It is a vaccine made from a virulent culture of bovine tubercle bacilli and attenuated by prolonged cultivation on a bile-containing medium. Unfortunately most of the experiments with the vaccine were either not controlled or improperly controlled.

In recent years controlled studies have been made, especially in America. However, there is still no unanimity of opinion as regards their value, and there has been no study made which has not been criticized on method. In 1946, the U.S.P.H.S. began to sponsor trials of BCG vaccination under controlled conditions, with vaccine made in a single laboratory. New York State has undertaken a similar study. Until definitive results are obtained from these studies the general use of BCG is not recommended.

It should be pointed out that there are a number of technical difficulties in the preparation of the vaccine. It is not stable, so that the number of viable bacilli at the time of use may be only 0.1 or less of the original number. It is difficult to maintain, and 8 to 10 days is the limit of use of any batch. Attempts are being made to increase its stability, but at present great care must be used in its preservation.

Originally, the vaccine was fed. Later Wallgren introduced the intracutaneous administration by a hypodermic needle. About 10 years ago Rosenthal suggested the multiple puncture method. Birkhaug has developed an apparatus which makes a number of punctures simultaneously. Any one of the last three methods may be used.

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# Axillary Tissue in Radical Mastectomies

## PRELIMINARY REPORT OF A STUDY BY CLEARING TECHNIQUE

**Thomas K. Hood, M.D., and Ruth Fleming, M.D.**

THE PROGNOSIS following radical surgery in cases of cancer of the breast is considerably influenced by the presence or absence of axillary lymph node metastases. It is therefore important to have a complete examination of the axillary material removed. The present study was undertaken to determine whether nodes containing cancer cells were likely to be missed in the usual laboratory examination and, if so, whether the technique used in this study could be adapted for routine use in our laboratory; and to determine the approximate number of lymph nodes removed in our radical mastectomies. Ackerman[1] states that, in a routine laboratory examination of axillary tissue, between 20 and 30 nodes should be obtained and that as many as 80 have been found.

The technique used in clearing the axillary tissue is not new or original with us and the small number of specimens so far examined makes the study of no real statistical value. The Spalteholtz method of clearing tissue was used, as modified by Gilchrist and David in their illuminating study of lymphatic spread of rectal cancer.[2] The axillary material was tagged with sutures to mark: (a) the fat pad extending over the axillary vein; (b) the apex of the dissection; and (c) the tissue lying between the long thoracic and thoracodorsal nerves and extending beneath the axillary vein.

When the tissue was received in the laboratory it was washed thoroughly with water to remove as much blood as possible, since it was found that blood clots obscured small nodes and during the the dissection could be mistaken for nodes. The breast and muscle fibers were removed and the axillary tissue was fixed in Cornoy's solution for 24 hours. It was then dehydrated by passage through the alcohols and benzine, starting with alcohol 70 percent, and was next placed in methyl salicylate for 24 to 48 hours, in which the tissue becomes almost transparent (figure 1). After it was clear the dissection was done under the same solution. The lymph nodes were removed, sectioned, and studied microscopically.

Figure 1. Photograph of a cleared specimen.

Sixteen specimens were dissected. The number of nodes found varied from 17 to 76. During dissection the nodes were measured and their positions charted on a diagram (figure 2). Many were as

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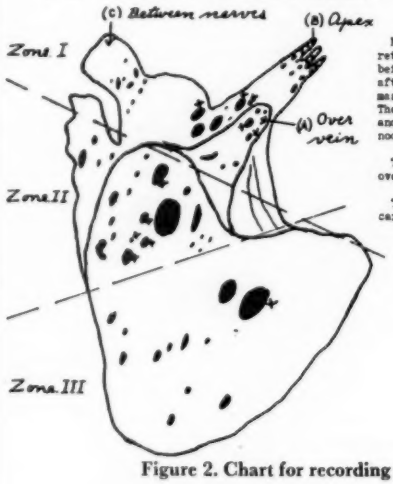
NAME Mrs. A.R. age 58 yrs. PATH. No. S 50-232

Date Operation 1/31/50 Date Dissection 5/30/50

Operation - Right Radical Mastectomy

| cm. | ZONE I | | ZONE II | | ZONE III | |
|---|---|---|---|---|---|---|
| | Number of nodes | Positive | Number of nodes | Positive | Number of nodes | Positive |
| 0- 4 | 29 | 2 | 11 | 2 | 5 | 0 |
| 4- 8 | 10 | 3 | 6 | 3 | 5 | 0 |
| 8-15 | 0 | 0 | 4 | 0 | 2 | 1 |
| 15plus | 0 | 0 | 2 | 0 | 0 | 0 |
| | 39 (25 sectioned) | 5 | 25 examined | 5 | 12 examined | 1 |

TOTAL 76 nodes found, 62 examined microscopically, 11 with metastases.




Patient first noted skin retraction of rt.breast 5 mo. before felt lump. Exam. 4 wks. after disc. lump. At that time mass 3 cm. size was felt in UOQ. There was retraction of the skin and nipple. No hard axillary nodes were felt.

Tissue removed measured overall 28X26X6.5 cm.

Tumor = Scirrhous Adenocarcinoma.

**Figure 2. Chart for recording findings.**

small as 1mm. In five of the specimens metastases in the nodes were found. In two of these five cases the involved nodes were small and could easily have been overlooked in a routine examination. Our findings are given in the table below.

## Conclusion

There is considerable variation in the number and size of lymph nodes obtained in axillary tissue removed during radical breast surgery. The larger palpable nodes may not be involved, yet smaller nodes more distant may show metastases. Involved nodes can easily be overlooked in the routine laboratory dissection. The technique is time consuming and expensive and would not be practical for routine use.

## References

[1]Ackerman, L. V., and del Regato, J. A., Cancer, Diagnosis, Treatment and Prognosis. C. V. Mosby Company, St. Louis, 1947, p. 930.

[2]Gilchrist, R. K., and David, V., Lymphatic spread of carcinoma of rectum, Ann. Surg. 108: 621-642, '38.

**RESULTS OF EXAMINATION OF AXILLARY LYMPH NODES**

| PATH. NO. | AGE | TYPE OF TUMOR | POSITION OF TUMOR | NO. NODES | NODES POSITIVE | POSITION OF NODES | LIKELY TO BE FOUND ROUTINE METHOD |
|---|---|---|---|---|---|---|---|
| S49-1823 | 40 | Scirrhous | Rt. U. O. Q. | 40 | 1 | Base | No |
| -1842 | 51 | Scirrhous | Lt. Lat. Nipple | 32 | 0 | | |
| -2266 | 53 | Scirrhous | Lt. U. O. Q. | 30 | 0 | | |
| -2280 | 55 | Scirrhous | Rt. Above Nipple | 37 | 3 | Base | Yes |
| -2744 | 76 | Scirrhous | Rt. U. O. Q. | 34 | 2 | Mid | No |
| -2820 | 37 | Scirrhous | Lt. U. O. Q. | 30 | 0 | | |
| S50-27 | 48 | Scirrhous | Lt. L. I. Q. | 41 | 15 | All | Yes |
| -68 | 57 | Scirrhous | Lt. Lat. Nipple | 17 | 0 | | |
| -93 | 61 | Scirrhous | Lt. Below Nipple | 22 | 0 | | |
| -199 | 51 | Scirrhous | Lt. U. O. Q. | 71 | 0 | | |
| -232 | 58 | Scirrhous | Rt. U. O. Q. | 76 | 11 | All | Yes |
| -236 | 34 | Simplex & Med. | Rt. U. I. Q. | 31 | 0 | | |
| -328 | 77 | Scirrhous | Rt. Lt. Nipple | 64 | 0 | | |
| -343 | 62 | Duct Cell | Lt. Below Nipple | 23 | 0 | | |
| -349 | 59 | Scirrhous | Lt. Lat. one-half | 60 | 0 | | |
| -1762 | 48 | Scirrhous | Rt. U. O. Q. | 38 | 0 | | |

# *QUESTION:* What Should the Doctor Know About Social Security?

*ANSWER BY:* Arthur J. Altmeyer

THE DOCTOR IN PRIVATE PRACTICE may be wondering how the recent changes in the social security law affect him as an employer. His clerical and office maintenance employees, salaried assistants, and laboratory technicians have had the protection of old-age and survivors insurance protection right along and the doctor has been reporting their earnings for social security credit. As an employer, there is just one immediately effective change for the doctor to bear in mind. The maximum of taxable wages to be reported has been advanced from $3,000 to $3,600 a year.

Self-employment as a doctor is not covered by the law. The 1950 Amendments to the Social Security Act, which covered most self-employment, specifically exclude certain self-employed professional people, and doctors are among them. There are ways, however, in which a doctor may gain social security benefit rights through self-employment or employment covered by the law. For instance, a doctor may own a drug store. His self-employment income up to $3,600 from that source must now be reported for social security purposes. Through it, he is now building toward insurance protection for himself and for his family. Or he may be self-employed as a manufacturer or distributor of a proprietary product. His income from such a source comes under the amended law.

Doctors employed on the staffs of hospitals, laboratories, or clinics operated for profit have been covered by the social security law all along, and so have those employed in business or industry. The extension of coverage to employees of nonprofit organizations, and to State and local government employees (by Federal-State agreement), will result in old-age and survivors insurance protection for more members of the medical profession.

Social security, however, for the self-employed physician or surgeon is still the exception rather than the rule. Interns in the employ of a hospital or in private medical practice as self-employed persons are not covered. However, if employed by nonprofit organizations, they can be covered if the organization waives its exemption from the taxes imposed under the Federal Insurance Contributions Act and two-thirds of its employees sign a certificate stating that they desire to be covered. A doctor employed by the organization at that time, who signs the certificate, is covered by the law. Also covered are all employees (including doctors) hired by the organization after the agreement becomes effective. In these cases, it is not necessary for the new employees to sign a certificate requesting coverage.

As a state or local government employee, a doctor is covered by the law only if the state enters into an agreement to accept coverage for the group or instrumentality by which he is employed, and if he is not under a retirement system in force at the time the State-Federal agreement becomes effective.

Social security has been extended to the nursing profession on a much wider basis. In the first place, nursing, as self-employment, is not an excluded profession. An estimated 65,000 self-employed private duty nurses were automatically brought under the law on the first of January. Practical nurses are now under social security also. While some of the latter will be classed as domestic employees and may be covered subject to the wage and regularity test for such workers, those who operate on a fee basis under the direction of a physician will be classed as self-employed just as are registered nurses. Some Federal Government nurses not protected by an existing retirement system are also brought under social security.

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It is as employees of nonprofit hospitals and schools of nursing, however, that the greater number of these professionals may become eligible for social security. Contrasted with the comparatively few nurses who had this insurance protection as employees in proprietary institutions operated for profit, doctors' offices, or industrial establishments, the number is impressive. An estimated 196,000 may have social security under the optional or voluntary provisions of the new law. (Services performed as a student nurse in the employ of a hospital or nurses' training school are excluded from social security if the student nurse is regularly attending classes in a state chartered or approved training school.)

Of importance to many doctors and to a great many nurses is the provision in the amended social security law applying to service in World War II. Wage credits of $160 a month are given for every month of active military service between September 16, 1940, and July 24, 1947, inclusive. This applies to men and women whose discharge or release was under conditions other than dishonorable, and who were in active service for a period of at least 90 days. Length of service is not a consideration if discharge was caused by service-connected disability. These war service wage credits are not applicable if a benefit in whole or part on the same period of service in World War II is payable under the civil service, military, railroad, or any other Federal retirement system. However, pensions or compensation paid by the Veterans Administration do not preclude these old-age and survivors wage credits under social security.

Just what is the importance of these war service wage credits to members of the medical and nursing professions? Let us take the case of Dr. X. For three years prior to World War II, he was employed on the staff of a private proprietary hospital. His wages were credited to his social security account. Then came Pearl Harbor and four years in the Army Medical Corps. His three pre-war years in employment, plus his $160 a month wage credits for his 4 years of active war service mean that Dr. X is fully insured, and will continue so until the middle of 1965. His family now has insurance protection under social security, and will have this protection for nearly 15 years. Dr. X, however, will not reach age 65 for a good many years. He must have 10 years of work covered by the law in order to become permanently insured. He now has seven. If, at any time before his retirement at age 65 or later, he earns credits in three more years of work covered by the law he will be insured for life.

Now, let us consider the case of Registered Nurse Y. Before the war, she was employed in a hospital. It was a nonprofit institution; consequently, the employees were not covered for social security. During World War II, Nurse Y served overseas. She was on active duty for three years, so she has $160 a month wage credits for that period of time. Since the war, Nurse Y has been in practice and, as of January first of this year, the nonprofit hospital in which she is employed chose to come under social security. Her wages up to $3,600 a year are now building toward old-age and survivors insurance. At the end of 1951, she will have another year credited to her social security. Even if she stopped work entirely after 1951, she would continue to be fully insured until 1959. As a single woman, with dependent parents over age 65, survivors insurance benefit payments based on her social security account would be payable to them in case of her death at any time before that date. If she continues to work after this year, they will continue to have this protection as long as the total of her wage credits (time worked under social security) represents at least one-half the elapsed time (after 1950) between Jan. 1, 1951, and the time of her death. Nurse Y will have monthly benefit payments herself when she retires at age 65 or later if she maintains her insured status.

The case of this nurse is not exceptional. Over 75,000 nurses (one-third of all registered nurses in the country) served in the armed forces during World War II. Most of them are now entitled to social security wage credits based on their active service. Many doctors have wage credits from the same source, and as a result for some years their families have a substantial protection. Unlike the nurse, however, the self-employed doctor cannot continue to build credits toward permanent social security protection through the practice of medicine.

The physician's interest in social security will not be confined, however, to his own direct involvement or to the participation of his staff. Many doctors come face to face with the financial problems of their patients, and they will find this year that a greatly increased number of their patients now have protection, or more substantial protection, under old-age and survivors insurance.

This is especially true of older people now approaching 65, the age at which social security retirement benefit payments can begin. Under the old law, it was necessary to have worked in a covered job one-half the time after 1936 until age 65 or death to become insured. The new requirement is one-half the time after 1950 until 65 or death. This "new start" provision makes it possible for people now 62 or over to be fully insured after one and one-half years of covered work. Moreover, this one and one-half years of wage credits may have been

acquired at any time since the original law went into effect. The new law continues the requirement of at least one and one-half years of covered work to become eligible for retirement benefit payments, and a person is still permanently insured after ten years of such work.

Now about the benefit amounts. The whole scale of these monthly payments has been very substantially raised in order to effect a more realistic connection with the current cost of living. The minimum benefit payments have been doubled. The lowest payment to an insured retired person is now $20 per month; the man who had been getting $15 a month is now receiving a check for $30. The sliding scale of new benefit rates provides for slightly smaller increases for beneficiaries in the upper payment brackets. For example, the former monthly payment of $26 is now about $48, while the top retirement payment, $46 under the old law, is now $68.50. Today, quite a large number of families, where three or more children and the mother survive an insured worker, are receiving from $100 to the maximum of $150 a month whereas, under the old law, the maximum payment to a surviving family was $80.

Payments on the account of a worker insured under social security who retires or dies a few years hence will be somewhat higher. This will be due to the $3,600 maximum yearly earnings now credited and taxed for social security purposes, and to the new formula for computing benefits which will be in general use after 1952. For example, a person averaging $300 a month after 1950 in employment or self-employment covered by the law will get $80 in monthly benefits. His wife, when she is 65, will get $40 a month.

The social security amendments of 1950 extended family protection to meet other types of financial crises. A not infrequent case is that of the aged husband who must retire while he still has responsibility for a younger wife and children. Under the new law a mother with minor children is entitled to monthly benefit payments after her insured husband's retirement even though she herself may not have reached age 65. Her entitlement to benefits in case of his death, which has been a part of the law for more than a decade, is continued by the new law. Now, either in his retirement or in case of his death, she may get benefit payments as long as she has their minor children in her care. As before, she may receive wife's or widow's benefits when she reaches age 65.

In general, the woman who is the family breadwinner gains new stature under the amended law. Her own protection as a wage-earner or self-employed person is increased. Now her social security account can also lead to monthly payments for her dependent husband, or widower, aged 65 or over. He must be the father of her children, or have been married to her for not less than three years at the time of her retirement or death. In addition, she must have been the source of at least one-half of his support at the time of her retirement or death.

The mother who is also the chief support of her minor children has gained new recognition under social security. Payments are now made to the children of an insured mother in case of her death, regardless of the presence of the father in the home. It is sufficient that she was furnishing at least one-half of the child's support at the time of her death.

Any discussion of the physician's interest in social security would be incomplete without recognizing the physical and psychological impact of the retirement process. Medical science has demonstrated that sudden retirement may be profoundly detrimental to the worker. Those who administer this program of old-age insurance have found that most workers today are anxious to remain active as long as they can. The whole nation is becoming increasingly aware, as the average age of the population increases, that we cannot afford to lose the productivity of all, or even a large proportion of the able-bodied people past 65. Widespread efforts are under way to improve the opportunities of older workers to retain an active place in the labor force or to find other constructive outlets for their energies and ability.

It is important to emphasize, then, that the retirement features of this Federal insurance program are not intended to fix an arbitrary retirement age, or to encourage the retirement of the able worker who would be happier on the job. Rather, this is contributory insurance against loss of income caused by old age, protecting those who do find retirement necessary.

# The A. W. H. in the Philippine Islands

## OPENING OF THE CLINIC FOR WOMEN AND CHILDREN, IN MANILA

*Address of Dr. Remedios Goquiolay Arellano, Vice-President of the Philippine Medical Women's Association, at the opening of the Clinic for Women and Children, in Manila.*

It is my distinct privilege to give the opening remarks on this occasion of the inauguration of our Clinic for Women and Children, marking the fulfillment of one of the projects to which we devoted our fondest efforts.

**Philippine Medical Women's Clinic for Women and Children, Manila. Dr. Fe del Mundo, President, is standing at the right.**

Be it said at the outset to the everlasting credit of our President, Dr. Fe del Mundo, that due to her initiative and untiring efforts and the effective assistance of Miss Kleppler, Director of Methodist Social Center, the organization of this clinic was carried to a successful conclusion with the kind support of the American Women's Hospitals.

This gesture of the American Medical Women's Association is just one of the many examples of the characteristic altruism of the American peoples, and we publicly express our gratitude to our sister physicians on the other side of the ocean.

The other members of the Philippine Medical Women's Association fully deserve also our congratulations for their unselfish help in contributing equipment and furniture, and for offering part of their valuable time to the service of the association by keeping duties in this clinic. I am sure that over and above their desire to serve the association they are inspired by a loftier spirit: to serve the community.

In these days, when we have to avail ourselves of all means at our disposal to counteract the inroads of communism, the Philippine Medical Women's Association wishes to contribute its humble effort. We mean to show by deeds and not by words alone that the masses of our people can receive adequate medical attention as regards infant and maternal care. By keeping our statistics complete and in order we hope to contribute in the solution of problems confronting government authorities regarding infant nutrition and welfare.

The organization of this clinic, important as it is, does not mark the end of our endeavors. Encouraged by the support of our friends and with the active cooperation of all the members of the Philippine Medical Women's Association, we will strive towards our next goal: the building and organization of a hospital on the site at Pandacan, generously donated by Dr. Maria Paz Mendoza Guazon, outstanding not only for her accomplishments as a scientist but also for her personal qualities and as the wife of the late Dr. Potenciano Guazon, one of the foremost surgeons the Philippines has ever produced.

# These Were The First

**Elizabeth Bass, M.D.**

*[This month the* JOURNAL *inaugurates a feature by Dr. Elizabeth Bass, who is well known for her interest in the history of women in medicine. "These Were The First" will include brief accounts of medical women who established precedents in medical and in other fields. Material for this column is obtained from the "Women in Medicine Collection" of the Matas Medical Library, Tulane University School of Medicine, New Orleans.*—Ed.]

DR. ELIZABETH BLACKWELL (1821-1910) was the first woman of modern times to graduate in medicine. Upon receiving her diploma from Dean Lee of Geneva Medical College, Geneva, New York, in 1849, she spoke these solemn words: "Sir, by the help of the Most High it shall be the effort of my life to shed honor on your diploma." Dr. Blackwell was also the first woman physician to be placed on the British Medical Register (1859).

LADY ANNE HALKETT (1622-1699) is the first woman army doctor of whose service we have authentic record. A staunch Royalist, she served as surgeon in the Royal Army of Scotland and was highly commended for her medical and military career. She was the author of 21 books, including her autobiography, which told of five years of army life.

DR. MARY WALKER (1832-1919) was the first woman to serve on the staff of an army in the United States. She rendered excellent service and after the campaign continued to crusade for women's rights and for the improvement of medical conditions for soldiers. During the Civil War she was commissioned a lieutenant and assistant surgeon with the Union Army. She graduated in medicine at Syracuse in 1855 and practiced in Columbus, Ohio.

DR. ANN PRESTON (1813-1872) was the first woman dean of the first medical college for women, The Female Medical College, later the Woman's Medical College of Pennsylvania, and the first woman to hold a professorial chair in a medical school (1853), the Chair of Physiology of that college.

DR. HU KING ENG was the first Chinese girl to come to the Woman's Medical College of Pennsylvania. After graduating in 1894 she was given direct control of the Mary Woolston Memorial Hospital at Foochow and became known in China as the "Miracle Lady of Foochow."

DR. MARY PUTNAM JACOBI (1842-1906) was the first woman admitted to L'Ecole de Médicine in Paris, where she graduated in 1871, receiving the highest marks in each of her five examinations. Dr. Jacobi was elected to the New York Academy of Medicine and appointed Chairman of the Neurologic Section of the Academy, the first woman to be so distinguished.

DR. DOROTHEA CHRISTINA LAPORINI-ERXLEBEN (1715-1762) is considered the first woman to receive a full medical degree from any German university, graduating in 1754 from Halle. Her diploma was presented by King Frederick the Great.

DR. RACHEL BODLEY (1831-1888) was the first woman professor of chemistry at the Female Medical College (1865) and was later dean (1874-1888). She was a member of the New York Academy of Medicine and a charter member of the American Chemical Society.

DR. EMMA L. CALL, a graduate of the University of Michigan in 1873, was the first woman admitted to the Massachusetts Medical Society by examination (1884) after long controversy. She practiced for many years in Boston.

LADY FLORENCE BARRETT, former president of the British Medical Women's Federation and of the Medical Women's International Association, was the first woman to speak from the pulpit of Bristol Cathedral. This was in 1924, and her subject was "The Degradation of Sex."

MADAME MARIE ANN VICTOIRE GILLAIN (Widow Boivin) (1773-1847), one of the greatest of French obstetricians, wrote the first classical description of the hydatidiform mole. She invented a new pelvimeter and a vaginal speculum, and was one of the first to listen to the fetal heart with a stethoscope. Although offered high positions, she served in a hospital for fallen women and died in want.

Dr. Clara Swain (d.1910) was the first woman physician accepted as a medical missionary, going to India in 1870 where she was presented an estate by Mohammed Kallub Ali Khan, as a site for a woman's hospital.

Dr. Anandibai Joshee, *a* graduate of the Woman's Medical College of Pennsylvania, was the first high caste Brahmin woman student to come to this country and the first Hindu woman to receive the degree of doctor of medicine in any country. She was appointed physician in charge of the female ward of the Albert Edward Hospital in Kalkapur, India.

Lady Constance Butler was appointed in 1931 as director of the roentgen-ray department of St. Andrew's Hospital in London, and is said to be the first Enlish woman physician to take up the specialty of roentgen therapy.

Dr. Honora Acosta-Sison was the first Filipino woman to be graduated in medicine (1900) and to practice. Since 1942 she has served as head of the Department of Obstetrics and Professor of Gynecology in the University of the Philippines. She graduated from the Woman's Medical College of Pennsylvania.

Dr. Catherine Macfarlane was the first woman physician elected to the College of Physicians of Philadelphia (1932), 150 years after its founding and 80 years after the founding of the Woman's Medical College of Pennsylvania, from which Dr. Macfarlane graduated in 1898. She was also president of the Obstetrical Society of Philadelphia from 1933 to 1934, the first woman to be so honored.

Dr. Caroline Purnell, who was graduated from the Woman's Medical College of Pennsylvania in 1887, was the first woman to be admitted to the American College of Surgeons (1914).

Dr. Martha M. Eliot was the first woman to hold the office of president of the American Public Health Association (1949). She was formerly Assistant Director-General of the United Nations World Health Organization, and is now Director of the United States Children's Bureau.

Dr. S. Josephine Baker (1873-1945) was the first woman to earn the degree of Doctor of Public Health, the first woman to hold an executive governmental position, the first woman to be appointed to professional rank in the League of Nations, and the first individual to act on the idea that preventive medicine in baby and child care is a function of government.

Dr. Elise S. L'Esperance, noted pathologist and bacteriologist, was the first woman to attain the rank of assistant professor in Cornell University Medical College (1920). In 1937 she established, at the New York Infirmary for Women and Children, the first Cancer Prevention Clinic, the fame of which has instigated the formation of similar clinics far and wide.

Dr. Sophie Penfield was the first woman physician to settle in Connecticut. She graduated in 1869 from New York Medical College and Hospital for Women, Homeopathic, and was a talented lecturer and active worker in the Federated Women's Clubs.

Dr. Marie Elizabeth Zakrzewska was appointed Chief Accoucheuse of the Hospital Charity in Berlin (1852) as successor to Dr. Joseph Hermans Schmidt, professor in the school and chief director. At the time, Dr. Zakrzewska was 22 years of age. In 1858 she came to America, graduated in medicine from Cleveland Medical School, taught obstetrics at the New England Female College, and later founded the New England Hospital for Women and Children.

Professor Hilda Lloyd was made Professor of the Royal College of Obstetricians and Gynecologists (1950), and was the first woman to be elected president of any of the three English Royal Colleges. She is Professor of Obstetrics and Gynecology in United Birmingham Hospitals and Senior Surgeon at the Woman's Hospital and Maternity Hospital.

Dr. Rakel Jalas was the first woman doctor to be made a member of the Finnish Parliament (1948), and was a member of the Finnish section of the World Health Organization.

Lieutenant Commander Bernice R. Walters, graduate in 1936 of the Woman's Medical College of Pennsylvania, is the first woman physician to be assigned to sea duty on a hospital ship, the "Consolation," (1951).

Dr. Hannah Longshore was the first woman to begin the practice of medicine in Philadelphia (May 1853), and was appointed Demonstrator of Anatomy in 1851 at the Female Medical College while she was still a student.

# ELEANOR ANDERSON CAMPBELL, M.D.

## Co-Founder of the Judson Health Center, New York

In June, 1920, Dr. Eleanor Anderson Campbell heeded the pleas of the Reverend A. Ray Petty of Judson Memorial Church on Washington Square, New York, when he said, "I can't stand the crooked legs of the children down here. Help me." And Dr. Campbell did more than help *him*. She has helped nearly one million men, women, and children, through the Judson Health Center which she with Dr. Petty founded.

Dr. Campbell is one of the few individuals who studied medicine with a purely philanthropic purpose. She was first inspired to help the needy when she was a young girl and visited some tenements with a cousin. She knew the visit was a failure. Her cousin's patronizing attitude and advice, though well-meaning, were a great disappointment to those who hoped the visitor would give them money or clothing. The visit was not repeated; but Eleanor Anderson could not forget that sordid picture of cold-water flats, dirty children, and over-worked mothers. She knew help of real value was necessary.

ELEANOR ANDERSON CAMPBELL, M.D.

Even though she later married, had a daughter, and enjoyed an interesting social life, she still felt a strong desire to serve the unfortunate. So it was that when she was in her thirties she decided to become a physician, feeling that in this way she could best reach her goal. In 1916, she graduated from Boston University Medical School, and an internship at Metropolitan Hospital, New York, followed. But Dr. Eleanor Anderson Campbell never planned to be paid for her medical services. She wanted to do free medical social service work where the need was greatest.

When Dr. Petty's plea for help came Dr. Campbell was ready to answer it, and on January 12, 1921, a free baby clinic was opened in two rooms in the basement of the Judson Memorial Church.

At first the people of the district were averse to attending the new clinic; but before long they flocked to it and were well pleased and happy over the treatment they received. There was no thought of race, creed, or color. All were treated equally. Soon the two small rooms were overcrowded with the many, many patients, and Dr. Campbell raised enough money to move, in July, 1922, to a large brick building at 237 Thompson Street, in one of the most destitute sections of Greenwich Village. Not only was the building larger but there was an increase in the number and type of clinic services. A dental hygiene clinic, a nursery school, and a child guidance clinic, one of the first in the city, were welcome additions.

In the past 30 years Dr. Campbell and her staff have helped almost a million men, women, and children. On November 1, 1950, the Judson Health Center moved again, to a new white brick building at 34 Spring Street, between Mott and Mulberry Streets. There are now 14 different clinic services. The program at the Center includes health examinations for infants, pre-school children, adolescent boys and girls, men and women: referral services, mainly oral hygiene, dental and eye clinics for those attending the health service; routine audiometer tests; home visiting by nurses and nutritionists for health supervision and education; individual and group work for health education. There is also a

"charm class," a pseudonym for the hygiene clinic for adolescent girls, where they are taught the benefits of bodily cleanliness, correct posture, clean clothes, and hair do's. Dr. Campbell hopes soon to add a mental hygiene clinic.

The area served by the Judson Health Center is no longer the "health desert of New York." The death rate among babies has dropped from 95 per 1,000 to 20.8, about one-half the rate for Manhattan as a whole. No longer are there children with crooked legs due to rickets. Eyes are better and teeth are sounder. The Center has fulfilled its purpose of meeting the health needs of the community; but it does not take all the credit. It led the way, but many public and private agencies have had a part in the improvement.

On March 15, 1951, Mayor Vincent R. Impellitteri presented a testimonial scroll to Dr. Campbell. The scroll reviewed her achievements in the development of the Center and expressed pride in "the persistence and determination that have characterized Dr. Campbell's unwavering pursuit of her great humanitarian goal."

Thus the dreams and hopes of a young girl have been fulfilled.

*Marcelle Bernard,* M.D.

# News of Women in Medicine

The Dauphin County (Pennsylvania) Medical Society, on September 4, honored one of its members, Dr. Mary Riggs Noble, for her half century of service in the field of medicine. Dr. Noble was licensed to practice medicine in 1901 and has been affiliated with the Child Health Division of the Pennsylvania Department of Health since 1920. In addition to her many activities in medicine, she finds time to teach a Sunday morning class at the Pine Street Presbyterian Church in Harrisburg, Pennsylvania. She is a member of the Board of Directors of the Child Guidance Center of Harrisburg and is active in Girl Scout activities in the Greater Harrisburg area. (And for many, many years she has been the zealous and indefatigable Treasurer of the American Medical Women's Association.—Ed.)

Among grants to medical institutions by the Chicago Heart Association for research projects in heart disease is one to the Women and Children's Hospital of Chicago for its Heart of the Home cardiac education program under the supervision of Dr. Margaret H. Austin.

A two-year fellowship in ophthalmology has been added to the list of post-graduate courses at the Woman's Medical College. The fellowship is under the direction of Dr. Eunice LeBaron Stockwell and will be carried out at the Hospital of the Woman's Medical College, the Woman's Hospital, Pennsylvania School for the Deaf, and the Children's Heart Hospital. The first fellowship was awarded to Dr. Marilyn Riggs of Los Angeles.

The Alumnae Association of the Woman's Medical College sponsored a banquet in Atlantic City during the meeting of the American Medical Association. Special guests were the 39 members of the graduating class of the College. Toastmistress was Dr. Madge C. L. McGuinness of New York City, and speakers were: Dr. Mary Bruins Allison, Dr. Adele Emily Streesman, Dr. Jessie Weston Fisher, and Dr. Mary Martin Sloop.

Dr. Carroll L. Birch has been appointed Dean of the Lady Hardinge Medical College at New Delhi, India. Dr. Birch is professor of internal medicine at the University of Illinois, College of Medicine, Chicago, Illinois.

For the first time in peacetime history, the Canadian Army has a female medical officer, Captain Ellice Agnes Parmenter, twenty-nine year old Scottish doctor and mother of two children. She was recently appointed to the Army in a ceremony at the Canadian Army Liaison Establishment in London, England.

A revolutionary new technique for penetrating the inner workings of the living cell was demonstrated at the Conference on the Chemistry and Physiology of the Cell Nucleus. The conference was held at the Brookhaven National Laboratory of the Atomic Energy Commission. The new technique, which opens many new vistas for the study of the basic mechanisms underlying the living processes, was developed and demonstrated by Dr. S. R. Pelc and Dr. Alma Howard of the Hammersmith Hospital, London. The method is expected to provide the most powerful tool yet devised for the study of cancer cells as compared with normal cells.

The Ida H. Hyde Woman's International Fellowship of $1,000 has been awarded to Dr. Maria Corti, a cardiologist at the Medical Clinic of the University of Milan, Italy. Dr. Corti will conduct research and clinical work on therapy of heart conditions, particularly on the use of digitalis and the

effectiveness of penicillin and ACTH in the prevention and therapy of rheumatic carditis. She will do her research at the Cardiological Clinic of Hospital Lariboisiere, Paris. Dr. Ella Roberts, associate in medicine at the Woman's Medical College and director of the Children's Heart Hospital in Philadelphia, received the 1951 Friendship Fete Award "for distinguished public service" for outstanding work at the Children's Heart Hospital. This award is given annually by a group of Philadelphia women's organizations cooperating to promote mutual understanding.

Dr. Sarah S. Deitrick, one-time chief of Public Health Service Field Operations for the Division of Health Services, has been appointed head of international activities for the Children's Bureau. She will handle all Bureau relations with Point IV programs and develop projects in foreign countries, selecting personnel to be sent abroad.

Dr. Mildred L. Ryan of Brockton, Massachusetts, has been elected treasurer of the New England Dermatological Society for the year 1951-1952.

Dr. Addie M. Lyon has been appointed superintendent of the Central State Hospital, Lakeland, Kentucky.

Dr. Marta Fraenkel of New York is a member of the Committee on Statistics of the Blind. This committee hopes to obtain more exact data and statistics on the causes of blindness.

The Army's first woman dentist, Captain Helen E. Meyers, of Philadelphia and Lancaster, Pennsylvania, has been given an assignment with the Dental Section of the Seventh Station Hospital in Trieste. In preparation for her service abroad, Captain Meyers reported on August 28 to the Medical Field Service School, Brooke Army Medical Center, Fort Sam Houston, Texas, to take the regulation five week dental orientation course. She leaves for Trieste on October 15. Dr. Meyers was commissioned in the Army Dental Corps Reserve last March and has been on duty at the Woman's Army Corps Training Center, Fort Lee, Virginia.

Dr. Elizabeth U. Corbett of Kansas City, Kansas, has been appointed an instructor in the department of pathology and oncology at the University of Kansas School of Medicine, Kansas City.

Various "new drugs" used in the treatment of tuberculosis will be evaluated under more than a dozen of the grants awarded by the Microbiological Institute of the National Institutes of Health. Dr. Hattie E. Alexander of the College of Physicians and Surgeons, Columbia University, New York, has received a grant of $10,500. Her research subject will be the mutual influence between viruses and bacteria. She will study the biology of human and swine influenza bacilli and the factors influencing pathogenicity. Dr. Alexander has also received another grant of $16,736 for investigation of the biology of Hemophilus pertussis. . . . Dr. Ruth E. Miller of the Woman's Medical College of Pennsylvania has been given $5,448. She will conduct a study of the effect of immune reactions on the metabolism of bacteria.

WOMEN AT WORK

**Dr. Elizabeth Kittredge and her committee at work on the Branch One special number of the JOURNAL (November). L. to R. Dr. Kittredge, Dr. Donlon, Dr. Pincock, Dr. Kahler, and, in front, Dr. Platt.**

It is with deep regret that we announce the death of Dr. Marie Louise Lefort on August 7, 1951. She graduated from the Medical College of the New York Infirmary for Women and Children. She was the first woman physician appointed as district physician by the New York Board of Health before the first World War. In 1918, Dr. Lefort gave up her medical practice in Newark to head a medical unit caring for soldiers gassed on the battlefields of France. After the war she remained in France and became head of the American Memorial Hospital for Children at Rheims. She received many honors for her work among French soldiers, including an officership in the French Legion of Honor.

At a course on internal medicine to be held at the University of Cincinnati College of Medicine one of the lecturers will be Dr. Helen I. Glueck, assistant professor of medicine at that college. Her topic will be "Present Status of Anticoagulant Therapy of Myocardial Infarcation; the experiences of the past five years."

Marcelle Bernard, M.D., *News Editor*
635 East 211 St., New York 67, N. Y.

# BOOK NOTICES

(Editor's Note:—These reviews represent the individual opinions of the reviewers and not necessarily those of the members of the Editorial Board of the JOURNAL.)

**ELECTROENCEPHALOGRAPHY in Clinical Practice. By Robert S. Schwab, M.D., Director of the Brain Wave Laboratory, Massachusetts General Hospital, and Associate In Neurology, Harvard Medical School. 195 pages with 106 figures. Price $6.50. W. B. Saunders Company, Philadelphia & London, 1951.**

Dr. Schwab, a neurological clinician as well as the Director of the Brain Wave Laboratory at Massachusetts General Hospital describes his recent monograph on the subject of electroencephalography rather negatively, as neither a reference book nor a technical manual. But to the neurologist in clinical practice, it is a thoroughly readable and interesting resume of the valuable contribution which the electroencephalogram has made to the practice of psychiatry, neurology, and neurosurgery. Though the electroencephalogram was the brain child of a psychiatrist, Hans Berger, it has made the greater contribution to neurology and this text should become a standard for the practicing neurologist.

Dr. Schwab has introduced his subject with a brief review of the work of the pioneers in this field, which had its beginning in 1924, as an offspring of neurophysiology. There are chapters describing the normal electroencephalograms of adults with the variations seen in adolescents and in infancy.

Although the clinical application of the E.E.G. in the diagnosis of neurological and neurosurgical problems is Dr. Schwab's main objective, his suggestions regarding the role which the electroencephalogram may play in research in physiological and metabolic problems of the nervous system are intriguing. This book is therefore a mental stimulant which the neurologist, so often tied down by an anatomical point of view, may well take to heart.

The last chapter is devoted to the organization of an electroencephaographic laboratory, the training of a staff, and the interpretation of records. An inclusive glossary of new terms which have come into use with the development of the electroencephalogram, brings this interesting book to a fitting close.

—Kate Constable, M.D.

**ANATOMY IN SURGERY. By Philip Thorek, M.D., F.A.C.S., F.I.C.S., Assistant Clinical Professor of Surgery (Formerly assigned to Gross and Topographic Anatomy), University of Illinois College of Medicine; Diplomate, American Board of Surgery; Associate Professor of Topographic Anatomy and Clinical Surgery, Cook County Graduate School of Medicine; Member, American Association of Anatomists; Fellow, American College of Chest Physicians; Co-Surgeon in Chief, American Hospital; Associate Attending Surgeon, Cook County Hospital; Senior Attending Surgeon, Alexian Brothers' Hospital. Pp. 916, 720 illustrations, 211 in color. Price $22.50. J. B. Lippincott Company, Philadelphia, 1951.**

In this book the emphasis is placed on surgical anatomy. The body is taken up by regions, and techniques of the more common operations are given under the area involved; the surgical procedures give the anatomy meaning and are sufficiently detailed to serve as a guide or review for the surgeon. The regions are well covered and the important anatomical variations are given.

The print is clear, the paper is heavy, and the illustrations are excellent; more than half of them being in color for greater clarity. The labels are in English, and the index is good. No references are given. This book should be useful to the general surgeon.

—Susanna Atwell, M.D.

**SYMPOSIUM ON STEROIDS IN EXPERIMENTAL AND CLINICAL PRACTICE. Edited for the Committee on Arrangements by Abraham White, M.D., University of California Medical Center, Los Angeles. Pp. 415, with figures, tables. Price, $7.50. The Blakiston Company, Philadelphia, 1951.**

The question as to whether the 11-desoxysteroids, particularly the pregneninolone group, are effective in rheumatoid arthritis and the collagen diseases is not settled in this symposium. The book is a collection of papers read at the First Steroid Conference held at Cuernavaca, Mexico, in February 1951. Hundreds of steroid compounds were synthesized by the Syntex Chemists and distributed widely for clinical evaluation. To achieve rapid progress each worker was asked to sum up his work, even if preliminary, and present it to all concerned for critical discussion. When the results were contradictory it pointed out the need for an exact terminology both in diagnosis and clinical results. In areas where there was agreement it prevented time being lost through repeating the same steps. There is little knowledge of any of the pharmacological, metabolic and clinical effects of any of the 11-desoxysteroids, with the exception of the sex hormones and desoxycorticosterone. While there was no evidence that any of the compounds tested were as effective as ACTH, cortisone, or compound F in rheumatoid arthritis, the findings are provocative of further study.

There are also several reports on the use of steroids in inhibiting the growth of certain types of tumors with reversal in some cases. Evidence is given that pregneninolone is effective in sterility in the male. The pharmacological and therapeutic effects may be entirely separate from the physiological effect. This gives rise to the hope that a synthetic formula will be found which can be produced cheaply in quantity, and which is potent therapeutically with no undesirable side effects.

This book covers a subject of growing importance to every physician. If a loose-leaf sheet could have been appended giving the structural formula of each compound mentioned, it would have made it easier for the average physician to follow. Merck's pamphlet, "The Chemical ABC's of the Adrenocortical Steroids with particular reference to Cortone" can be used as an easily available primer. It is a fascinating subject which is well worth the effort given to read it.

—Grace Talbott, M.D.

**MANUAL OF MASSAGE AND MOVEMENTS. By Edith M. Prosser, T.M.M.G., Trained Nurse and Certified Midwife, Member of Council of Chartered Society of Massage and Medical Gymnastics 1936-44, Sister in Charge Massage Department and Principal of School 1930-1949, continuing Examiner for Chartered Society of Physiotherapy at the Middlesex Hospital, London, since 1928. Illustrated by Miss M. Ruddick. Pp. 379. Price $5.00. J. B. Lippincott Company, Philadelphia, 1951.**

The author has accomplished her purpose admirably in producing a concise, descriptive manual of massage techniques and exercise for the extremities and trunk with the proper emphasis on exercise. She has organized her material well and enhanced it with stick figures which cleverly illustrate the principal muscles involved. All procedures have been carefully evaluated for method of presentation, effort required and effects to be expected.

The unfamiliar British terms for exercise positions and the unbelievably inclusive list of physiological effects of massage are the only detractions. Because specific directions have been substituted for vague general principles, and there is a wealth of material, the beginner, particularly, should find this a useful everyday reference guide.

—Jacquelin Perry, M.D.

**CLINICAL UNIPOLAR ELECTROCARDIOGRAPHY. By Bernard S. Lipman, A.B., M.D., Assistant in Medicine, Emory University School of Medicine, Atlanta; and Edward Massie, A.B., M.D., F.A.C.P., Assistant Professor of Clinical Medicine, Washington University School of Medicine; Director of Heart Station, Barnes Hospital, St. Louis; Director, Cardiovascular Clinic, Washington University Clinics. Pp. 226, 191 figures. Price $5.00. Year Book Publishers, Inc., Chicago, 1951.**

This is a concisely written small text, dealing with unipolar electrocardiography. It is intended for beginners in the subject, and does not include any detailed discussions. The authors outline briefly the technique of unipolars; the physiologic principles involved; and the relationship of unipolar leads to standard leads. About one-third of the book contains illustrative electrocardiograms which have been very well chosen. Excellent simple diagrams accompany the text. This book should be very valuable to the student and practitioner who have not received advanced training in electrocardiography.

—Roberta Fenlon, M.D.

**SPEECH HABILITATION IN CEREBRAL PALSY. By Marion T. Cass, Instructor in Speech Science, Columbia University College of Physicians and Surgeons. Pp. 207. Price $3.00. Columbia University Press, New York, 1951.**

This book attempts to approach the vitally important communication problems of cerebral palsied children. The introductory chapters discuss the background of research and etiology of cerebral palsy. In the chapter on Motor-Re-educational Therapy Dr. Cass has given a resume of accepted therapeutic principles and practices of muscular re-educational therapy. Dr. Cass considers motor-educational speech therapy merely as an extending theory of muscular re-education to those muscles which serve the function of speech.

According to Dr. Cass, methodology of speech habilitation of these children incorporates the same fundamentals through which the normal child progresses during the period of speech acquisition. The usual order of sounds is presented. The author furnishes the reader with a complete list of movements absolutely essential to acoustically normal speech. The chapter, "Methodology," reports on respiratory control, relaxation, passive and assisted motion. The use of rhymes is recommended for breathing exercises.

In the chapter, "Teaching the Sound," every possible angle and detail of teaching the sound is discussed. Auditory training, relaxation, differential relaxation, and exercises in articulatory muscle control are mentioned as an essential part of teaching.

It seems to this reviewer that an exact technique of teaching the sound to the cerebral palsied child, as it is so ably presented in Dr. Cass's book, should not be limited to using rhymes as the principal material. A whole battery of material creatively presented would offer a more effective stimulation to the palsied child, who is confronted with the gigantic task of speech acquisition. The short chapter dedicated to educational programs is subdivided into "Rehabilitation Program" and "Proposals." Here the reviewer misses a more thorough discussion of the specific emotional problems of the cerebral palsied child and the importance of the role his mother plays in every phase of the child's development.

Dr. Cass's book can be highly recommended to those speech therapists who are especially interested in the phonetic side of speech habilitation of the cerebral palsied child.

—Regine F. Wohlmann

**MANAGEMENT OF CELIAC DISEASE. By Sidney Valentine Haas, M.D., Professor of Pediatrics and Director of the Department, New York Polyclinic Medical School and Hospital; Consultant, Lebanon Hospital, Harlem Hospital, and Riverside Hospital for Contagious Diseases, New York Health Department; and Merrill Patterson Haas, M.D. Pp. 186, 12 illustrations. Price $5.00. J. B. Lippincott Company, Philadelphia, 1951.**

This is an exhaustive review of the literature, with different views on each aspect of celiac disease brought together and compared. Diagnosis, symptomatology, treatment, course, and prognosis, based on the authors' long interest in the condition and the many cases they have personally treated, are correlated with the literature and presented in detail. An interesting etiologic hypothesis is expounded. Most valuable to the clinician is the detailed description of the authors' successful program of treatment and the little errors which may cause failures.

—George Sherman, M.D.

**HANDBOOK OF NUTRITION: A Symposium. Prepared under the auspices of the Council on Foods and Nutrition of the American Medical Association. Published for the American Medical Association. Second Edition. Pp. 717, 7 charts, 28 tables, 35 figures. Price $4.50. The Blakiston Company, Philadelphia, New York, Toronto, 1951.**

Much progress has been made in the field of nutrition in the eight years since the first edition of this valuable book appeared. The significant advances are collected in one volume which should be in the library of every hospital and medical school. The contributors are prominent in their fields. The section on "Proteins in Nutrition," by Lewis, is of especial value, as is also the fine discussion of "Fluid Therapy," by Darrow and Pratt, in which the problems of potassium deficiency are covered.

It is recommended as a handy reference which every doctor may use with profit.

—Leonora Andersen, M.D.

**HOPE AND HELP FOR THE ALCOHOLIC. By Harold W. Lovell, M.D., Associate Professor of Neurology, New York Medical College and Flower and Fifth Avenue Hospitals. Psychiatrist, Payne Whitney Clinic, New York Hospital; Vice-President, National Committee on Alcoholism. Pp. 215. Price $2.75. Doubleday and Company, New York, 1951.**

This brief, informal book summarizes the present concepts of alcoholism. It is considered to be a psychosomatic disease in which the neurosis is better known than the somatic aspects. The alcoholic's neurosis involves emotional immaturity, overambition, and inability to accept his imperfections. Besides the neurosis, however, there is a metabolic disease in which the alcoholic differs from others—a defective function of the adrenal cortex, and, perhaps, also of the pituitary, leading to low blood sugar and inability to metabolize alcohol. Our present methods of attack have been aimed primarily at the neurosis and require absolute avoidance of the offending material. Alcoholics Anonymous, in which the member must admit that he is an alcoholic and unable to tolerate alcohol, and in which he finds companionship with others in a similar state, is considered most valuable. Evaluation of psychotherapy, antabuse, vitamin therapy, and adrenal cortical extract is given. The author, a psychiatrist, has been doing research on the use of adrenal cortical extract for acute alcoholism.

—Carol Leland, M.D.

**GROWTH AND DEVELOPMENT OF CHILDREN. By Ernest H. Watson, M.D., Associate Professor; and George H. Lowrey, M.D., Instructor, Department of Pediatrics and Communicable Diseases, University of Michigan Medical School. Pp. 251, with charts. Price $5.75. The Year Book Publishers, Inc., Chicago, 1951.**

The increasing interest of the pediatrician in the evaluation of the child's growth and development has stimulated the authors to publish a comprehensive review of this subject. It is a well written book covering most angles of up-to-date knowledge in this field. Though the data included are in general not original, the personal clinical experiences of the writers have added a great deal to make the book an interesting one and to emphasize the importance of the appraisal of a child's growth and development as part of its general health. The intimate relationship between physical, mental, and emotional development is stressed. These factors are discussed first in general, with special attention to the influence of hereditary, prenatal, and postnatal environmental factors. In the following chapters a more specific outline is given of physiologic and mental changes which take place in the growing child. A separate chapter deals with fetal growth and development. A great number of growth and developmental tables and graphs are discussed. While the book is generally concerned with the normal child, a final small chapter on abnormal growth is included to indicate the possibilities of variation outside the normal range. The book can be well recommended to the graduate student of pediatrics as well as to the pediatrician, for whose use it was intended.

—Frances Lande, M.D.

**REPORT OF THE COMMISSION ON NARCOTIC DRUGS—Supp. No. 9. A United Nations Publication. Pp. 70. Price $.60. Columbia University Press, New York, 1951.**

This is the report to the Economic and Social Council on the Fourth Session of the Commission on Narcotic Drugs, Lake Success, New York, May 16 to June 3, 1949. It discusses the problems which the Commission considered of paramount importance to the successful international control of narcotic drugs.

—Ada Chree Reid, M.D.

**A FEW BUTTONS MISSING: The Case Book of a Psychiatrist. By James T. Fisher, M.D., formerly Professor of Mental and Nervous Diseases, Los Angeles College of Physicians and Surgeons; Professor, Medical School, University of California; Psychiatric Examiner, Los Angeles Induction Center; and Lowell S. Hawley, Writer, Teacher, Radio Writer. Pp. 282. Price $3.75. J. B. Lippincott Company, Philadelphia and New York, 1951.**

This is the life story of the author, a student and practitioner of psychiatry for more than half a century. A student of Freud in Vienna, he has been associated with many psychiatrists in various places over the years. In 1946, at the age of 82, he journeyed to Peru and spent a year in Lima, studying psychosomatic medicine, and he still has a limited practice.

After receiving his degree in medicine at Harvard Medical School and then finishing his internship, he was associated with Dr. Morton Prince and so was attracted to psychiatry. Since Freud at that time was the leading figure among the world's psychiatrists and Vienna was the center of all medical learning, he proceeded there and spent some time in the pursuit of this specialty. On his return home he settled in Los Angeles, where he has practiced ever since, except for the years of military service in both World Wars.

The book covers all phases of psychiatry and relates the great advances made during the past 50 years, since it is in that time that psychiatry has been rationalized and brought out from its mystery and humbuggery. The author writes of the present knowledge of all types of madness, neuroses, psychoses, etc., giving many case histories to illustrate the forms of each. The text is detailed and many amusing anecdotes are told in a way to hold the interest of the reader. The writing is delightful, with salty humor, and is not too technical, though it does cover a vast and exact description of present day psychiatry as compared with the former brutal treatment of the insane before 1900. The chapters on hypnoses, hysteria, shock treatment, dream analyses, psychosomatic diseases, and all the others are complete. The book should be widely read, for though it is a text on psychiatry it is so well written that the general public, not greatly interested in psychiatry, will certainly be well compensated by the pleasure obtained from reading it and, in addition, will derive a much better understanding of the subject that will be of benefit to all.

—Elise S. L'Esperance, M.D.

**PROCEEDINGS OF THE SECOND CLINICAL ACTH CONFERENCE. Volume I—Research; Volume II—Therapeutics. Edited by John R. Mott, M.D. Volume I—Pp. 531, 276 figures, 52 tables. Price $8.50. Volume II—Pp. 716, 311 figures, 81 tables. Price $8.50. The Blakiston Company, Philadelphia, 1951.**

The development and use of ACTH have gone forward at so rapid a pace that it is indeed fortunate that such conferences as these are held and the proceedings made available immediately. It is unfortunate, however, that, although in the introduction to each volume the statement is made that the use of ACTH is still in the investigative stage, this fact is not stressed sufficiently.

It is this reviewer's opinion that much further investigation by competent observers is needed before more widespread use of this potent drug is encouraged.

—Leonora Andersen, M.D.

# *Letters*

## TO THE EDITOR

A copy of the July issue of your journal has recently come to my attention, and I should like to take this opportunity to express our appreciation for such eloquent proof that you and your association so strongly support the work of the World Health Organization. We fully realize that without the efforts of persons like yourself, willing and able to help with all the means at their disposal, WHO could not expect to succeed in the tasks which have been set for it.

May I thank you for your continued interest in us and may I congratulate you on the manner in which you have given it expression in this special number of the JOURNAL of the AMERICAN MEDICAL WOMEN'S ASSOCIATION.

Very sincerely yours,
(Signed) Dr. Pierre Dorolle
Deputy Director-General
World Health Organization

Journal of the
AMERICAN MEDICAL WOMEN'S ASSOCIATION

## ASSOCIATION NEWS AND ANNOUNCEMENTS

### MESSAGE FROM THE PRESIDENT

OFTEN, as I try to prod this Association to greater activity, I feel like a small person tweaking a lion's tail. The day will come when the American Medical Women's Association, together with other women's organizations, will become aware of its power. Good can best be accomplished by the united action of those having high purposes.

The response of the members of the Association to my various requests has been heartening. So few have refused. So many have responded with enthusiasm. The presence of your name on our roster signifies your real interest.

The Mid-Year Board Meeting will be held at the Grove Park Inn, Asheville, North Carolina, November 10-11. All members will be welcome. Of particular interest will be the address at the dinner on the tenth by Catherine Sims, Ph.D., on "What the United Nations Means to a Physician." Mrs. Sims is Associate Profesor of History and Political Science at Agnes Scott College. She studied at Columbia University, in Geneva, and at the Institute of Historical Research in the University of London. She is a Vice-President of the Young Women's Christian Association and Secretary of the Visiting Nurses Association in Atlanta. She belongs to Phi Beta Kappa, the American Association of University Women, the American Association of University Professors, the American Historical Association, the Southern Historical Association, and the Foreign Policy Association. She is a charming and magnetic speaker.

Mr. L. P. Hollis, of Greenville, South Carolina, and some of his associates, have invited the members of the Board to luncheon in Greenville as their guests on November 12. Transportation by bus from the hotel will be provided. This will enable the Board to visit the Maternity Shelter conducted in Greenville by the American Women's Hospitals. Those traveling by train may find it convenient to make reservations home from Greenville, which is about sixty miles south of Asheville and is on the main line of the Southern Railway.

On November 8, interested women doctors will be welcomed at Crossnore, North Carolina. It is here that Dr. Mary M. Sloop, chosen Mother of the Year last May, has built her magnificent mountain school. Directions for the trip to Crossnore will be provided those interested.

A weekend of good fellowship and relaxation in beautiful surroundings should tempt all of you. Please plan to come.

Amey Chappell

AMEY CHAPPELL, M.D.

**MID-YEAR BOARD MEETING**

NOVEMBER 8-12

GROVE PARK INN, ASHEVILLE, N. C.

## WE WELCOME THESE NEW MEMBERS

### California

**Elizabeth K. Y. Arvad, M.D.**—254 Park Avenue, Long Beach. *Pa. 13, 1937.*

**Geneva Beatty, M.D.** — Pine St., Long Beach. *Calif. 12, 1937. OG**

**Flora M. Phelps, M.D.**—543 Cedar St., Long Beach. *Mich. 1, 1901, OG*

**Dolores E. Johnson, M.D.**—2319 West Compton Blvd., Gardena. *Minn. 4, 1950.*

**Pauline McConnell Lehman, M.D.**—9400 Garden Grove Blvd., Garden Grove. *Neb. 5, 1933.*

**Mary B. Olney, M.D.**—1429 4th Avenue, San Francisco. *Calif. 1, 1922. Pd*

**Louise Oftedal Wensel, M.D.**—8411 La Mesa Blvd., La Mesa. *D. C. 2, 1949. Pd*

**Mary F. Callaghan, M.D.**—24 St. Joseph's Ave., Long Beach. *Kan. 2, 1944. OG*

**Hallie Buchanan Mont, M.D.**—12338 California St., No. Hollywood. *N.Y. 6, 1947. Pd*

**Martha A. James, M.D.**—2533 Ocean Ave., San Francisco 27. *Calif. 11, 1931. Pd*

**Dorothy Bartels, M.D.**—San Diego County Hospital, San Diego 3. *Ill. 11, 1946.*

**Verona L. Minning, M.D.**—San Diego County Hospital, San Diego 3. *Wis. 5, 1947. Pd*

**Emma O. Dong, M.D.**—255 Main St., Salinas. *Calif. 1, 1939. Oph*

**Olive Lundgren Bateman, M.D.**—3982 Rose St., Long Beach. *Minn. 4, 1941. Pd*

**Helen R. Robertson, M.D.**—P. O. Box 224, Balboa Island. *N.Y. 9, 1916.*

**Helen Marie Johnson, M.D.**—11 Maple Street, Salinas. *Calif. 12, 1930. Pd*

**Emma K. Willits, M.D.**—80 Scenic Way, San Francisco 21. *Ill. 6, 1896.*

### Connecticut

**Jessie R. Cockrill, M.D.**—55 Sterling Place, Bridgeport. *Calif. 11, 1929. Pd*

### District of Columbia

**Hilda May Bolden, M.D.**—3721 Jay Street, Washington. *Tenn. 7.*

### Georgia

**Vilda Shuman, M.D.**—601 Laurel St., Waycross. *Tenn. 5, 1940. Pd*

### Illinois

**Marion P. Siler, M.D.**—524 Forest Ave., Oak Park. *Ill. 1, 1915.*

**Alice R. Dakin, M.D.**—61 So. 7th Ave., LaGrange. *N.Y. 9, 1942. Pd*

**Carolina M. Gentile, M.D.**—5268 Crystal St., Chicago. *Ill. 42, 1945.*

### Iowa

**Mattie M. Crain, M.D.**—Deep River. *Ill. 9, 1900.*

**Mary L. Lyons, M.D.**—2102 Beaver St., Des Moines. *Ore. 2, 1948.*

### Massachusetts

**Patricia H. Benedict, M.D.**—264 Beacon St., Boston. *Mass. 5, 1936.*

**Olga E. Allers, M.D.**—1101 Beacon St., Boston. *Pa. 7, 1938. Pd*

**Gertrude Flint Frisbie, M.D.**—88 Dalton Road, Chelmsford. *Mass. 7, 1928.*

**Helen Wardner Evarts, M.D.**—775 Trapelo Road, Waltham. *Md. 7, 1922. Tb*

**Victoria Maxwell Cass, M.D.**—20 Ridgefield Road, Winchester. *Mass. 7, 1942.*

**Alice M. Broadhurst, M.D.**—175 Berkeley St., Boston. *Mass. 7, 1939.*

**Grace E. Lutman, M.D.**—79 Lull St., Islington. *Vt. 2, 1938.*

### Minnesota

**Catherine Burns, M.D.**—Medical Arts Bldg., Albert Lee. *Minn. 4, 1944.*

**Elizabeth C. Lowry, M.D.**—301 Kenwood Parkway, Minneapolis. *N.Y. 20, 1935. Pd*

**Alma Louise Wurdemann, M.D.**—314 Washington Ave., White Bear Lake. *Ia. 3, 1946.*

### New Jersey

**Helen Irene Anderson, M.D.**—New Jersey State Hospital, Greystone Park. *Calif. 12, 1936. P&N*

**Ella Freas Harris, M.D.**—73 Highland Avenue, Chatham. *Pa. 1, 1923.*

### New York

**Sophie Bookhalter, M.D.**—155 East 73rd St., New York 21. *Man. 1, 1936. P&N*

**Elizabeth Herzog de Csepel, M.D.**—55 East 86th St., New York 28. *Hung. 3, 1924. P&N*

**Vera S. Emanuel, M.D.**—155 West 81st Street, New York 24. *Afr. 1, 1941. Pd*

**Esther Fox, M.D.**—315 West 76th St., New York 23. *Fra. 6, 1933. Pd*

**Marjorie Lewisohn, M.D.**—115 East 73rd St., New York 21. *Md. 7, 1944. I**

**Helene Papanek, M.D.**—1 West 64th St., New York 23. *Aus. 7, 1925. P&N*

**Edith Peritz, M.D.**—152 West 58th St., New York 19. *Ger. 3, 1921. S*

**Elsie L. Renning, M.D.**—580 Park Ave., New York. *Minn. 4, 1939. OG*

**Elizabeth D. Strauss, M.D.**—315 Central Park West, New York 25. *Ger. 16, 1929. Path*

**Margaret Joan Giannini, M.D.**—930 Grand Concourse, Bronx 56. *Pa. 9, 1945. Pd*

**G. Jean Weil, M.D.**—895 West End Ave., New York 25. *Switz. 7, 1939. Anes*

**Annis E. Thomson, M.D.**—34 East 51st St., New York 22. *Ont. 1, 1921.*

**Mosetta C. White, M.D.**—461 West 43rd St., New York 18. *N.Y. 20, 1931.*

**Bella S. Van Bark, M.D.**—26 West 9th St., New York 11. *Pa. 7, 1935. P&N*

**Mary Fenyes Lerner, M.D.**—1320 Union St., Brooklyn. *Fra. 6, 1936.*

**Natalie D. Goldberg, M.D.**—2167 East 81st St., Brooklyn. *N.Y. 9, 1930. D&S*

**Rebecca Liswood, M.D.**—8415 Bay Parkway, Brooklyn 14. *N.Y. 9, 1930. Pd*

**Wanda Willig, M.D.**—9 East 78th St., New York 21. *Aus. 7, 1934. P&N*

**Lucy Therese Russo, M.D.**—37-56 75th St., Jackson Heights. *Mass. 5, 1943. Pd*

### North Carolina

**Margaret A. Barnes, M.D.**—1523 Elizabeth Ave., Charlotte. *Va. 1, 1943. Pd*

**Sarah E. Glass, M.D.**—State Hospital, Raleigh. *Ill. 1, 1938. P&N*

**Amelia Bauer-Kahn, M.D.**—415 City Bldg., Asheville. *Minn. 4, 1943. P&N*

**Louise Galloway, M.D.**—P. O. Box 89, Enka. *La. 1. Anes*

### Ohio

**Viola V. Startzman, M.D.**—421 No. Market St., Wooster. *O. 6, 1945. Pd*

**Oregon**

**Joycelin H. Robertson, M.D.**—627 Center St., Lakeview. *Ore. 2, 1931.*

**Mary B. Purvine, M.D.**—655 University St., Salem. *Ore. 2, 1903.*

**Pennsylvania**

**Helen E. di Silvestro, M.D.**—6362 Drexel Road, Philadelphia. *Pa. 13, 1942. I**

**Maxine S. Ostrum, M.D.**—2716 West Lehigh Ave., Philadelphia. *Pa. 9, 1945.*

**Sophie A. Brenner, M.D.**—1036 So. 54th St., Philadelphia 43. *Pa. 7, 1945. I**

**Ruth Stephenson, M.D.**—37 Westview Ave., Philadelphia. *Pa. 1, 1930. P&N*

**Texas**

**Blanche Osborne Terrell, M.D.**—1422 Pennsylvania Ave., Fort Worth 4. *Tex. 2, 1945. Pd*

**Carole J. Harrison, M.D.**—125 East Drive, Beaumont. *La. 5, 1944. Anes*

**Virginia**

**Elizabeth Holt Edmunds, M.D.**—618 Church St., Lynchburg. *Va. 1, 1935.*

**Madge D. May, M.D.**—290 Norva Park, Norfolk. *Va. 4, 1945.*

**Margaret A. Pennington, M.D.**—Buckingham Court House. *Va. 4, 1934.*

**Wisconsin**

**Mildred Mary-Anne Stone, M.D.**—124 No. Wisconsin St., Berlin. *Wis. 5, 1938.*

## RESIDENCIES AVAILABLE

Children's Hospital, 3700 California Street, San Francisco, California, has available for the current appointment year (July 1, 1951-June 30, 1952) the following appointments: anesthesiology, 2; otorhinolaryngology, 1; medicine, 1; radiology, 1; internships, 3.

Children's Hospital is a 250-bed hospital with an average daily census of approximately 180, which operates an outpatient department consisting of 24 clinics having 29,000 visits per year. Appointments to house staff are open to men and women, but, qualifications being equal, women applicants are given preference. Appointments are for one year (beginning usually July 1). Room, board, and laundry are supplied, plus a stipend.

Appointments for the year beginning July 1, 1952, will be made in October and include the following: anesthesiology, 2; communicable diseases, 1; otorhinolaryngology, 1; pediatrics, 5; obstetrics-gynecology, 4; medicine, 2; surgery, 2; radiology, 1. There are 9 rotating internship appointments (usually 8 services) to be made in February, 1952.

## MID-YEAR BOARD MEETING

NOVEMBER 8-12

GROVE PARK INN, ASHEVILLE, N. C.

*Thursday, November 8*

Visit to Crossnore, North Carolina.

*Friday, November 9*

9:00 a.m.—Finance Committee Meeting
2:00 p.m.—Publication Committee Meeting
8:00 p.m.—Executive Committee Meeting

*Saturday, November 10*

9:30 a.m.—Board Meeting.
1:00 p.m.—Luncheon, Grove Park Inn. Speaker—Dr. Camille Mermod, "Building for Strength."
3:00 p.m.—Board Meeting.
7:00 p.m.—Dinner—Grove Park Inn. Speaker — Mrs. Roff Sims, Ph.D., "What the United Nations Means to a Physician."

*Sunday, November 11*

9:30 a.m.—Board Meeting.
1:00 p.m.—Luncheon, Grove Park Inn. Speaker—Dr. Emma S. Fink, "A Medical Practice in the Southern Mountains"

*Monday, November 12*

9:00 a.m.—Leave by bus for Greenville, South Carolina. Visit Maternity Shelter. Luncheon.

## RESIDENCIES WANTED

Women doctors of Israel are very eager to come to the United States for postgraduate study. Because of currency restrictions it will be necessary for board and lodging to be supplied; therefore residencies are much desired, in all branches of medicine, but especially anesthesiology and gynecology. If you know of opportunities, please write the Editor, Suite 210, 2 Lexington Avenue, New York 10, N. Y.

# Opportunities For Women in Medicine

## RESEARCH GRANTS AND FELLOWSHIPS

Applications for research in the cardiovascular and related fields are being accepted by the American Heart Association for studies to be conducted during the academic year beginning in July, 1952. Applications for Research Grants-in-Aid to institutions, including grants for work in the basic sciences, may be filed up to December 1.

Fellowships for Established Investigators may be granted for a five year period at a minimum stipend of $5,000, with an annual increase of $500. Research Fellowships are granted for a one year period, with a stipend ranging from $3,000 to $4,300. Grants-in-Aid to institutions vary in amount and are designated for a specified program of research.

Information and forms may be obtained from the Medical Director, American Heart Association, 1775 Broadway, New York 19, N. Y.

## NEW YORK STATE DEPARTMENT OF HEALTH FELLOWSHIPS

The New York State Department of Health is offering fellowships in public health to young physicians interested in public health as a career. Completion of the required training qualifies the physician for a full-time public health position in New York State. Field and academic training are the two main constituents of the fellowship program, which is designed to qualify a physician as assistant to a district health officer, county health commissioner or city health commissioner.

Field training is obtained in a residency in public health with the State Health Department. During this time the resident is assigned to a district, county, or city health department approved as meeting the residency requirements of the American Board of Preventive Medicine and Public Health. This training is for one year, the first six months of which consist of a carefully planned experience under the immediate supervision of a qualified public health physician. During the last six months, the resident is given independent responsibility, still under careful supervision.

Academic training consists of one year at an approved school of public health. Usually six months field training is required before assignment to such school.

Applicants must possess the following qualifications: (1) Citizenship of the United States, or reasonable assurance of citizenship before completion of training. (2) Medical degree from a school approved by the AMA or from a foreign medical school whose graduates have been recommended by the AMA for consideration on the same basis as graduates of approved medical schools in the United States. (3) Internship of at least one year in a hospital approved for such internship by the AMA. (4) License to practice medicine in New York State, or eligibility for examination for such license. (5) Preferably not more than 35 years of age.

Experience in the clinical practice of medicine is desirable but not required, except for training requiring special clinical knowledge and experience.

The fellowship is for 24 months or less, depending upon the qualifications of the fellow at the time of beginning training. Appointment can be made at any time during the year. The monthly stipend allowed during the field training is $350. During the academic training it is $350 per month for fellows with dependents and $200 for those without dependents. In addition, authorized travel, other necessary expenses, and tuition to the school are paid.

Upon completion of training, the physician is qualified for appointment to a beginning position in a state or local health department.

The physician is expected to accept a public health position in New York State upon completion of training. Many vacancies exist in beginning positions. Promotion to more responsible positions is usually rapid.

Details concerning training in tuberculosis control and other public health positions requiring specialized training may be obtained from the State Department of Health.

Applications for fellowships should be submitted to the Office of Professional Training, New York State Department of Health, Albany, New York, on a form provided by the Department. Personal interviews will be arranged for those having the necessary qualifications.

(From Bulletin, State Department of Health, Albany, New York, August 6, 1951.)

## BY THIS TIME . . .

You have probably received your copy of the survey which is most important to the continued success of this Journal. We kept it as short and as uncomplicated as possible in the hope that it would induce you to fill it out and send it to us at once rather than drop it in the nearest wastebasket.

We cannot stress too strongly the importance of this survey to those who use the Journal as an advertising medium and to you, who read your Journal and make a point of giving it to others to read.

If you are not a member of the American Medical Women's Association we still want your answers to the questionnaire. And we would most certainly appreciate your cooperation in returning the answers immediately in the prepaid envelope that came with your copy of the survey. As soon as possible we will make available the results—you will be interested to know what others think!

---

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Public Health, Government or Industrial Appointments .....

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951

*Continued on following page*

# Through The Menstrual Years of Life-

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Checks payable to the American Medical Women's Association, Inc., must accompany application. Mail to Treasurer, A.M.W.A., Box 98, Madison Square Station, New York 10, N. Y.

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## BOOKS RECEIVED

Books received are acknowledged in the following section. Those which are considered to be of special interest or value to our readers will be reviewed under Book Notices.

THE PHYSIOLOGY OF THE NEWBORN INFANT. By Clement A. Smith, M.D., Associate Professor of Pediatrics, Boston Lying-in Hospital, Harvard Medical School. Second Edition. Pp. 339, 44 figures. Price $7.50. Charles C. Thomas, Springfield, 1951.

CLINICAL PEDIATRIC UROLOGY. By Meredith Campbell, M.S., M.D., F.A.C.S., Professor of Urology, New York University Post-Graduate Medical School. Section on Nephritis and Allied Diseases in Infancy and Childhood, by Elvira Goettsch, A.B., M.D.; and John D. Lyttle, A.B., M.D. Pp. 1113, 543 figures. Price $18.00. W. B. Saunders Company, Philadelphia, 1951.

A TEXTBOOK OF PATHOLOGY: Pathologic Anatomy in Relation to the Causes, Pathogenesis, and Clinical Manifestations of Disease. By Robert Allan Moore, Edward Mallinckrodt, Professor of Pathology, Washington University School of Medicine, St. Louis. Second Edition. Pp. 1048, 501 figures. Price $12.50. W. B. Saunders Company, Philadelphia, 1951.

SPATIAL VECTOR ELECTROCARDIOGRAPHY: Clinical Electrocardiographic Interpretation. By Robert P. Grant, M.D., National Heart Institute, Bethesda, Md., and E. Harvey Estes, Jr., M.D., U. S. Naval Hospital, Bethesda, Md. Pp. 149, 41 figures. Price $4.50. The Blakiston Company, Philadelphia, New York, Toronto, 1951.

CLINICAL AND ROENTGENOLOGIC EVALUATION OF THE PELVIS IN OBSTETRICS. By Howard G. Moloy, M.D., M.Sc., Assistant Clinical Professor of Obstetrics and Gynecology, College of Physicians and Surgeons, Columbia University and The Sloane Hospital for Women. Pp. 119, 68 figures. Price $2.50. W. B. Saunders Company, Philadelphia, 1951.

A TEXTBOOK OF MEDICAL CONDITIONS FOR PHYSIOTHERAPISTS. By Joan E. Cash, B.A., M.C.S.P. Pp. 339, 11 plates, 12 figures. Price $5.00. J. B. Lippincott Company, Philadelphia, 1951.

PRACTICAL CLINICAL PSYCHIATRY. By Edward A. Strecker, Litt.D., LL.D., M.D., Professor of Psychiatry, School of Medicine, University of Pennsylvania; and others. Seventh Edition. Pp. 506, 35 figures, 14 tables. Price $7.00. The Blakiston Company, Philadelphia, New York, Toronto, 1951.

LARGE SCALE RORSCHACH TECHNIQUES: A Manual for the Group Rorschach and Multiple Choice Tests. By M. R. Harrower, Ph.D., Research and Consulting Psychologist, New York City; and M. E. Steiner, M.A., Research Psychologist, General Electric Company, Bridgeport, Connecticut; and others. Second Edition. Pp. 343, 92 tables. Price $8.50. Charles C. Thomas, Springfield, Illinois, 1951.

ATLAS OF CROSS SECTION ANATOMY OF THE BRAIN: Guide to the Study of the Morphology and Fiber Tracts of the Human Brain. Fifth Section of Emil Villiger's BRAIN AND SPINAL CORD. Revised by Eugen Ludwig, Professor of Anatomy, University of Basel. ATLAS further revised by A. T. Rasmussen, Ph.D., Professor of Anatomy, University of Minnesota. Fourteenth Edition; 63 plates. Price $5.00. The Blakiston Company, Philadelphia, New York, Toronto, 1951.

DER GEBURTS-MECHANISMUS: Jatrophysikalische und iatromathematische Erkenntnisse eines Geburtshelfers ueber die mechanischen Gesetze des menslichen Geburtsaktes. By Dr. Bruno Leo Friton. Pp. 60. Price $2.00. Frank X. Friton, Pittsburgh, 1951.

MEDICAL TREATMENT: Principles and Their Application. Edited by Geoffrey Evans, M.D., F.R.C.P., Consulting Physician, St. Bartholomew's Hospital, with 53 contributors. Pp. 1398. Price $20.00. C. V. Mosby Company, St. Louis, 1951.

RICE, DIETARY CONTROLS AND BLOOD PRESSURE: with Menus and Recipes. By Frances I. Seymour, M.D., Medical Director of the National Research Foundation for Fertility, Inc. Pp. 201. Price $2.95. Froben Press, Inc., New York, 1951.

PHYSIOLOGY OF HEART AND CIRCULATION AND ITS CLINICAL APPLICATION IN PHYSICAL MEDICINE. A Symposium presented at the 27th Annual Conference of the American Physical Therapy Association, Cleveland, Ohio, June 26-30, 1950. Pp. 63. Price $1.00. American Physical Therapy Association, New York, 1950.

PHARMACEUTICAL MANUFACTURE—ITS SCIENCE AND ECONOMICS: THE ODYSSEY OF MODERN DRUG RESEARCH. By Robert Burlingham. Pp. 124, illustrations, many in color. The Upjohn Company, Kalamazoo, 1951.

PROCEEDINGS OF THE FIRST CONFERENCE ON ELECTROKYMOGRAPHY: Held May 25-26, 1950, in Bethesda, Md., sponsored by the National Heart Institute. Edited by Bert R. Boone, M.D., and others. Public Health Service Publication No. 59. Federal Security Agency, Public Health Service, National Heart Institute, National Institutes of Health. Pp. 213. Price $.75. United States Government Printing Office, Washington, 1951.

CRITERIA FOR THE SELECTION OF PSYCHOTIC PATIENTS FOR PSYCHOSURGERY: PROCEEDINGS OF THE FIRST RESEARCH CONFERENCE ON PSYCHOSURGERY: New York, N. Y., November 17 and 18, 1949. Chairman, Fred A. Mettler, M.D., Ph.D. Editor, Newton Bigelow, M.D. Public Health Service Publication No. 16. Federal Security Agency, Public Health Service, National Institutes of Health. Pp. 173. Price $1.00. United States Government Printing Office, Washington, 1951.


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## EDITORIAL FORECAST

### November, 1951

This will be the first special number to be supplied by the branches and comes from Branch One, of the American Medical Women's Association, the Women's Medical Society of the District of Columbia. Dr. Elizabeth Kittredge, the supervising editor, has collected an imposing array of articles among which are the following:

"Leukemia Research with Laboratory Mice," by Thelma Dunn, M.D., Pathologist, National Cancer Institute, U. S. Public Health Service.

"Effect of Anxiety on the Electrocardiogram," by Ruth B. Benedict, M.D., Clinical Instructor, Department of Medicine, George Washington University School of Medicine.

"Home Care Service for the Cancer Patient," by Alice B. Brigham, M.D., Visiting Physician for the Home Care Service, George Washington University Hospital.

"Current Concepts in Allergy," by Eloise Kailin, M.D., Member of American Academy of Allergy and Associate Editor of Allergy Abstracts.

"Case of Tetanus Treated with Intravenous Procaine and Curare," by Margaret Callan, M.D., Chief of Anesthesia, Suburban Hospital.

"An Unusual Postpartum Complication," by Josephine E. Renshaw, M.D., Associate in Obstetrics, Garfield Memorial Hospital.

In the Problem Clinic, the subject of "Simultaneous Death" is discussed by Irene Kennedy, member of the Women's Bar Association of the District of Columbia.

"Women Doctors in Washington Today," a statistical survey, has been prepared by Lois Platt, M.D., and Dr. Kittredge has written an interesting account of the "History of Branch One" and biographical sketches of two of Washington's outstanding women doctors for the "Album of Women in Medicine."


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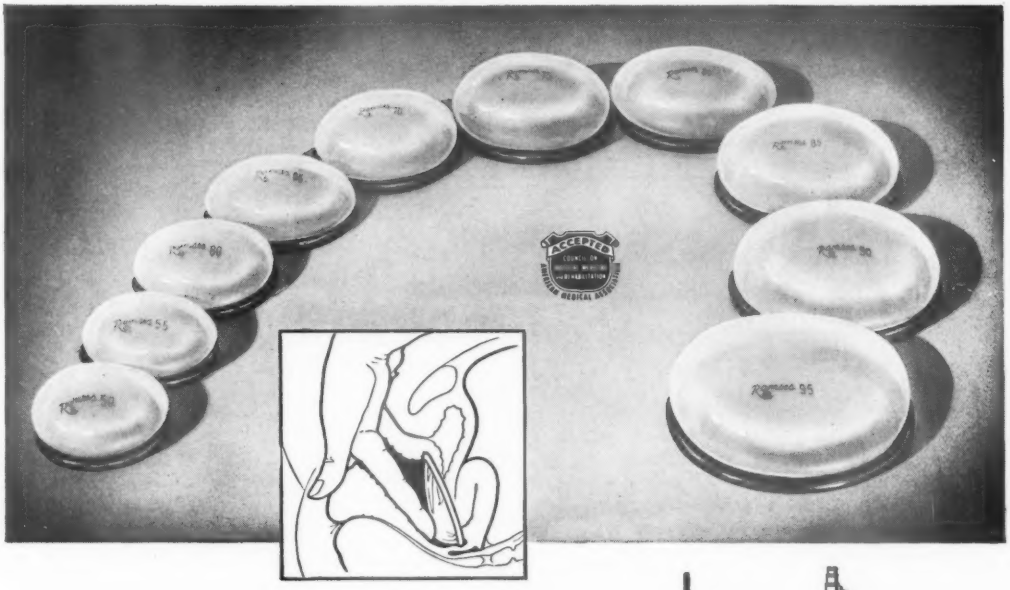

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1. Clark, Le M.: The Vaginal Diaphragm. St. Louis, C. V. Mosby Company, 1938; p. 43.
2. Dickinson, R. L.: Techniques of Conception Control. Baltimore, Williams & Wilkins Company, 1950; p. 17.

Unretouched photomicrograph of the dome (enlarged 10 diameters) and the rim (inset) of a "RAMSES" Flexible Cushioned Diaphragm.

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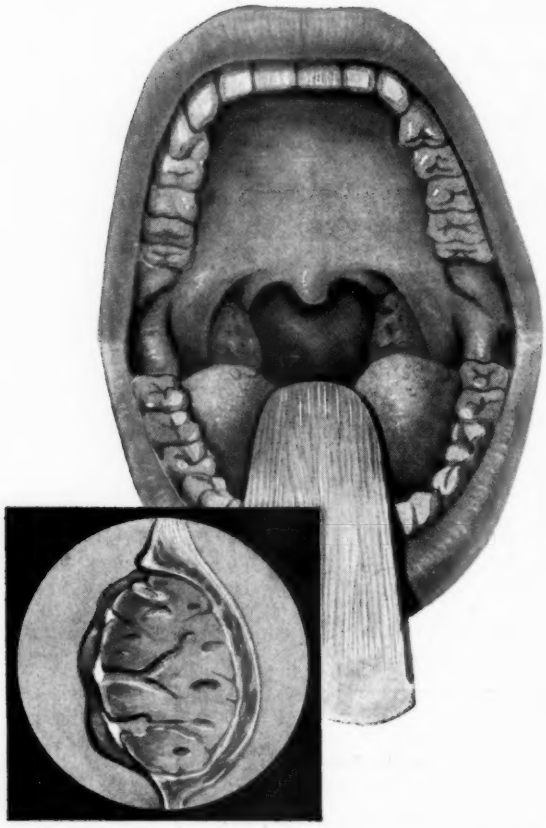

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*Sayer, R. J.; Michel, J.; Moll, F. C., and Kirby, W. M. M.: Am. J. M. Sc. 221:256 (March) 1951*

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